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PSYCHOLOGY: ITS BASIS AND APPLICATION.[1]

BY J. W. SPRINGTHORPE, M.A., M.D. (MELBOURNE), M.R.C.P. (LOND.),
Melbourne.

AFTER unpardonable delay psycho-therapy is coming to its own. It is, I presume, as an investigator and exponent ever since my first professional paper in 1884, written, curiously enough, upon "The Psychological Aspect of the Sexual Appetite," that I have been asked to introduce the present therapeutic position. The task is as difficult as the honour is great. But the following summary will, I trust, suffice by way of introduction.

THE BASIS.

In man mind is inextricably interwoven with matter and life. Matter has been traced back to a complexity of motions and life may well be a new complexity directed by some new, unknown force. But of their ultimate essence we still know nothing. As regards mind, most authorities now agree that, whatever it may be, the psychical cannot be explained in terms of the physical. Materialism thus seems practically dead, psycho-physical parallelism is dying and there remain psychical monism and Kant's view of "two sides of one common unknown reality." To me the former seems the more reasonable. Whatever the connexion, however, human behaviour still continues under the laws of physics and biology, in so far as they are not codified into something higher. We are thus as a profession saved from the fundamental mistakes of Christian science, faith healers, hypnotists and quacks generally, who either deny or are ignorant of these underlying considerations. Physiology, again, has subdivided reactions into excito-motor, sensori-motor, ideo-motor and medullary. Biology has further separated the instinctive sub-granular layer of the cortex from the educative supra-granular, which distinguishes man from the lower animals. "No neurones, no mind" is unwarranted. The true position is: "No neurones, no recognized manifestation of mind." Perhaps the best description of our bit of mind is, so to speak, a psychic atom of the supreme and the verdict of psychology and that of philosophy, namely, that in both man and the supreme the will is directed by intelligence and controlled by emotion, whilst the destiny of man, with his power of choice, seems to be that of progress through trial and testing, until at last he always acts in harmony with the supreme goodwill, which Kant said is "the only thing in the world or outside of it that can be termed absolutely and altogether good."

[1] Inaugural address delivered before the Section of Neurology and Psychiatry of the Victorian Branch of the British Medical Association on June 26, 1922.

Whatever our theories and views, we find mind like matter existing as energy, different apparently from that of the electron, but still showing itself both potential and kinetic and under the law of conservation. This psychic energy meets the electric in the cells of the brain, uses the sympathetic system as its servant and further influences growth and metabolism through the endocrine glands. And, although we are as ignorant of its real essence as we are of the nature of matter or of life, we have similarly learned a great deal as to its capacities, its mechanisms and its powers, as seen in dealing with consciousness.

Consciousness.

Consciousness is the quality that enables mind to keep its processes before it, to contemplate them and to select therefrom. We can now subdivide it into the ordinary, self-conscious or supra-conscious and the sub-conscious, including therein the pre-conscious, the unconscious and the subliminal. For this differentiation we are largely indebted to Freud.

Ordinary Consciousness.

Ordinary consciousness is the part under direct attention, kept up to requirements by present impressions and presenting a selective and restrictive excerpt from intuition and experience. Seated in the cortex, it represents the personality, acts progressively under the reality motive, tends to reason inductively and is affected more by indirect than by direct suggestion. The end of evolution it is the home of the educative and the seat of self-control.

The Sub-Conscious.

The sub-conscious is seated in the thalamic and the sub-cortical regions. It is the general switchboard of the senses and main storehouse of impressions (specially the infantile), registered whenever sufficiently intense to gain attention. It is fundamentally egocentric, follows the pleasure pain and not the reality motive, reasons deductively, is more fertile when the special senses are in abeyance or externally controlled and specially responsive to direct suggestion. It is, of course, always informing and influencing the conscious and, under certain conditions, such as reverie, dreams, the state just before sleeping or just following waking, it "outcrops" into the conscious. Intentional "tapping of the sub-conscious" has been elevated into an almost necessary procedure by the Freudian school and, as with the sub-conscious generally, too much importance is being attached to it. The natural manipulation of "this highest potential of intuition and experience" can be encouraged by the practice of "auto-hypnosis" as in the Yogis of India, as well as by hypnotism, light hypnotism being just as effective as deep and free from certain definite drawbacks. Freud calls it "the true psychic." This is probably true in childhood, when higher representations are not yet possible; but to regard this definition as applicable to the adult also is to subordinate facts to fancies, intelligence to instinct and morality to its absence. Such a view also would place eastern civilization in advance of western, which, as Euclid says, is absurd. In all probability it is rather the library, the office and the subordinate staff, not the master or final court of appeal. The whole position seems to be somewhat as follows: The sub-conscious, with its intuitions and its experiences, represents the Sancho Panza of our nature with its natural mother-wit, common sense, shrewdness and caution. It is thus well fitted for the every-day round of life and the ordinary struggle for existence and wins the prizes of action, though not of thought. But it is only the basis of individual development and only the starting point for racial advance. After filling it with the best experiences and minimizing or counteracting bad or false registrations as far as possible, we have still to educate the intelligence, to idealize the emotions, to develope morality and to attain that self-knowledge, self-reverence and self-control that "lead to sovereign power." To this end the sub-conscious is the main means.

Freud's damaging blot is his theory that all neuroses are the result of infantile sexual repression into the sub-conscious and that "no neurosis is possible in a normal sexual life." Probably no sexual life has ever been perfectly harmonious, but such an extreme view as Freud's could originate—like Krafft-Ebing's *"Psychopathia Sexualis"*—only in a community of sexual perverts and can be applicable only to similar cases outside. It has always been regarded by both British common sense and French insight as untrue, uncalled for and dangerous. The events of the war have caused Freud himself to modify it and it is now abandoned, except by a few obsessed partisans. The post-Freudian school which has taken its place, repudiates not only Freud's causation but also his deterministic view of life and behaviour, extends his sex-libido to every form of interest and striving, takes regression to include every failure of life task and makes failure in adaptation and not libido-satisfaction the starting point in neuroses. Its advocates still regard conflict as basal. The conflict is no longer between infantile sexuality and developing morality or æsthetics, but for adaptation to life and progress and along lines of compensation rather than of repression. To me this is of special interest, since I have always placed compensation alongside self-preservation and self-reproduction as "a third law of life" in our present stage of transition and indeterminedness.

Freudism also stands or falls with its theory and treatment of dreams. We are not yet certain as to the efficient cause of sleep, but a fundamental factor is the withdrawal of the sun's influence and the consequent minimizing of the need of cortical activity. Psychic energy becomes then and there potential, but, as the instinctive and vital continue, the sub-conscious remains active and its energy kinetic. As the need returns, self-consciousness returns and is aware only of what it then perceives, which is partial, momentary and apt to be influenced by auto-suggestion. In the phantasmagoria of dreams there are at least three possible factors: (1) As Bergson has emphasized, the sensory impressions, though minimized, still exist and may have a dominating

influence. (2) Pressing thoughts referring to the past, the present or the future may have been left as the last activity of the cortex or thalamus and so direct the trend of operations. (3) Past registered experiences may either act as storm centres or important stations when affected by the sub-conscious stream of energy. Freud limits all dream phenomena to this last, to the sex emotion and its influence before the age of five. It is serious enough for the psychic factor to have to play life's tune upon an instrument which may be structurally defective, but to handicap it further by limiting its powers to times when there was no intelligent knowledge and no control and to rule out all that has since happened under intelligence and volition are against both common sense and ethics and make the Creator or his equivalent a Mephistopheles incarnate. The post-Freudians wisely repudiate such a conception. Maeder insists that dreams are occupied with current problems and are to be interpreted as unconscious efforts at adaptation. Silberer admits infantile wishes in some cases, but mystic and higher importance in others. And Jung regards all as guides to the development of personality. Many others consider them as simply autogenetic hallucinations. It is thus unwise as well as untrue to attach to them anything like Freud's causation or interpretation.

Mental Structure.

Turning to mental structure, we find that all the complex powers of mind can be traced back to three unanalysable capacities—emotion, ideation and volition. We feel, we think, we will and not one of these can be defined in terms of the others. The due appreciation of their relative values calls for a revolution in treatment as well as in education.

Emotion.

Emotion is fundamental; "at it physiology and psychology touch." It not only translates sensations into feelings, but colours all ideas and binds all the mental processes together. It seems to be the reflex of the mind on itself. So far from being a hindrance to reason and a confuser of thought, it is more master than servant, as was recognized by Goethe when he wrote: "We are shaped and fashioned by what we love." At first it seeks to attain pleasure and to avoid pain and generally, if not always, it acts in response to suggestion.

Ideation.

Knowing is based upon perception and is simply the reflex of the mind to objects. It always has an emotional colouring. Its fundamental is awareness and it acts in response to attention. One of the greatest mistakes in education hitherto has been the over-estimation of its value. It is, of course, necessary for investigation and mental satisfaction.

Volition.

The place of the will is even more generally misunderstood. Will is essentially conscious striving to or from. It takes the place in the cortex that wish or desire occupies in the sub-conscious. But it comes at the end, not at the beginning, of the mental cycle and is the result of feeling and ideation after deliberation and decision. It is thus different from mere acquiescence, is often mistaken for impulse (due to auto-suggestion or emotion) and, as appears in post-epileptic automatism, what seems purposive is not necessarily volitional. Its probable ultimate end, to secure harmony by consciously choosing to act in accord with the supreme, we have already referred to. The new Nancy school lays stress upon its contrast with imagination which is dominant in childhood and in most, if not all, sub-conscious operations. Imagination is no larval form of reason, but the Don Quixote part of every individual. It is thus not only "the mistress of illusions," but instinctive in the artistic temperament, often creative and, according to Tyndall, "our greatest scientific weapon." According to Coué, whenever it and the will are at variance, the imagination invariably wins and in life, as Thoreau said: "If you have built castles in the air, the time has not been lost; that is where they should be built; now put foundations under them."

By itself knowing constitutes knowledge. Combined, emotion and volition constitute character. The latter is far more important and, as is frequently seen, increase in the one does not carry with it advance in the other.

Association of Mental Processes.

By use and habit all mental processes become associated and seek satisfaction through expression. But where there is dissatisfaction, dissociation and repression may occur and show themselves in mental ill-health which may be unrecognized as well as recognized by the individual. Even regression, *i.e.*, return to earlier memories and modes of expression, may occur.

Such complex operations naturally require complex mental mechanisms and for the elaboration of these we are largely indebted to Freud. They are, of course, not entities but simply illuminating descriptions of the ways in which attention and suggestion deal with conditions. The most important are (*i.*) the adjustive, by which minor emergencies are naturally met; (*ii.*) the protective, for self-preservation; (*iii.*) the wish fulfilment, for the completion of desires; (*iv.*) the compensatory, for making amends required for imperfect or new conditions; (*v.*) the sublimatory, for purposes of advance; (*vi.*) the negatavistic, for shutting out the unpleasant; (*vii.*) the justificatory, for giving reasons; and (*viii.*) the projective, for transferring elsewhere. In cases of failure we have (*ix.*) conversion, where an emotion is turned into a physical symptom; (*x.*) dissociation, where it is shut off; (*xi.*) substitution, where another takes its place; (*xii.*) displacement, where it is directed to some less painful object; and (*xiii.*) regression, where it is sent back to an earlier, even infantile, state. It appears as if the exhaustion neuroses largely follow defective adaptation, the hysteroid phenomena result from dissociation and the anxiety neuroses, ob-

sessions and shock give rise to repression or regression.

Unfortunately, Freud's views of mental conflicts and of repression into the sub-conscious do not by any means cover the whole ground; at times they even contravene definite laws. No doubt harmonious action spells satisfaction and at a certain stage dissatisfaction means conflict. But for most individuals and for all races present satisfaction would be an absurdity, even a crime. Conflict is, in fact, a law of advance, varying with the stage of development. Again, repression is not necessarily something to be intelligently overcome. It may arise from choice, structural defects, endocrine failures, insufficient attention, over-emotionalism, weak mental synthesis, unattainable as well as unbearable desires and incompatibility with reality. Even resistance which is the obverse side of repression and on the Freudian view requires to be discovered and overcome, is at times a sacred duty. Further, as the war proved conclusively and Freud himself has admitted, a sudden overpowering emotion may produce neuroses of all kinds and severities without either conflict or repression. Finally, the mere bringing of unbearable memories into consciousness does not necessarily remove either cause or results nor need their conscious fusion necessarily produce satisfaction, even at the expense of transference. Such fusion should, of course, give knowledge, but knowledge is not self-control and intelligent recognition of causation need not and often does not carry with it extinction of bad habits or give future balance. Explanation does not necessitate cure and even increased knowledge may be a further weariness to both mind and body, whilst, expression being the natural end of desire, the mind will continue to express knowingly (if wrongly), rather than ignorantly to repress. In the end satisfaction is attained rather by auto- than by hetero-suggestion and analysis. The real gain in Freudism would thus appear to lie in its suggestions rather than in its dogmas, in its amplification of the duality of consciousness and of the necessity for securing harmony where there is variance, though not along his lines.

Attention and Memory.

There are many other considerations which can be only briefly mentioned. Attention is the mental condition necessary for reception of messages which are psychically sufficiently intense and for the direction of the stream of subsequent events. In the child it is spontaneous and follows interest. Later on it is volitional and attended with effort. In the sub-conscious it has to assume a special form, to be willed for, but not willed during its sequelæ, yet leaving the intellect operative and the emotions aroused (as in reverie and light hypnosis). Memory is on the physical side registration and on the psychical manipulation of what is registered. According to Bergson it is part of the mind and ordinary memory is the selection produced by attention.

Fundamental Procedures.

In dealing practically with psychical conditions the three fundamental procedures are analysis, suggestion and re-education.

Analysis.

Analysis is the use of the intellect to elucidate and influence conditions. It may be either psycho-analysis, thought analysis, autognosis or persuasion in any form.

Suggestion.

More fundamental is suggestion, which has been elaborated into a system by the new Nancy school. Broadly considered, suggestion is the means by which impressions affect the mind and induce ideo-motor processes. It is the natural means of educing the natural powers, sub-conscious as well as conscious. It is spontaneous in all life and may be auto-cultivated as well as hetero-induced.

Re-education.

Re-education represents fixation of the good and provision for meeting the future. It thus includes everything necessary for the satisfaction of the new points of view, the new convictions, the new tendencies and the new reactions. It is thus the most intricate and the most difficult, but upon its successful manipulation depends the permanency of results. Amplification will come when dealing with treatment.

Summary.

The problem of psychology may thus be summarized as follows:

1. Our psychical factor has the follows powers: (*i.*) It transforms into psychical the physical impressions which it receives. (*ii.*) It facilitates, inhibits or alters their expression. (*iii.*) It reacts downwards on all movements, sensations, secretions and functions and has special relations with the sympathetic nervous system and the endocrine glands. (*iv.*) It can transgress as well as obey laws. (*v.*) It can affect structure as well as function.

2. Psychology is the science of behaviour. Behaviour can be either normal or abnormal. (*i.*) Behaviour is normal when the laws of physics, biology and evolution are obeyed, when the emotions, the intelligence and the will work harmoniously, when in due course the reality motive is followed and when systemic satisfaction is secured. (*ii.*) Behavour is abnormal when the laws of physics or of life are disobeyed, when evolution is disturbed, when the endocrine glands or sympathetic nervous system are unsound or when the emotions, intelligence and the will work inharmoniously, follow the pleasure pain instead of the reality motive or fail to secure systemic satisfaction.

3. A psycho-therapeutic practitioner should thus be a clinician of experience and outlook, a neurologist with a working knowledge of the relations between the functional and the organic and up-to-date psychologically in both theory and practice.

This is the task that awaits the profession. Until he has thus fitted himself, the practitioner will be fighting the battle of disease with his best hand unused, will often fail where he should succeed and will leave the public who look to him for succour, to the ignorant and unscrupulous to whom they resort because of his default.

THE PHYSICAL BASIS OF INSANITY.[1]

By W. A. T. Lind, M.B., Ch.B. (Melb.),
Pathologist, Victorian Lunacy Department.

In regard to the ætiological factors in insanity there are two schools of thought, the physical and the psycho-pathological.

The psycho-pathologists claim that mental disturbances are caused by forgotten sexual experiences making themselves disagreeable under certain conditions and producing mental symptoms unless they are restored to present consciousness by the process called psycho-analysis. The physical or materialist school holds that the disorder in the psyche is due to physical disorder or disease affecting the brain cells directly or indirectly.

More than twenty-five years ago Sigmund Freud, of Vienna, evolved the theory of the sex complex in explanation of what were then termed functional nerve diseases. A few years before the great war this teaching and the practice of psycho-analysis had a steadily increasing number of advocates on the continents of Europe and America and to a lesser degree in England. About the time of the outbreak of war this new form of psycho-therapeutics was arousing considerable and acrimonious controversy in the British medical journals. During the war the opportunities for the study of the many neuroses produced in the field were so many that the reports of the cases cured by psycho-therapeutics began to flood the medical literature of the day. Every mail to these shores brought fresh books describing variations in theories and methods of treatment. And so it has continued ever since. To the reader of these books there seems to be a competition in coining terms and extending the list of diseases which can be treated by these methods. In his presidential address, published in *The British Medical Journal*, July 3, 1921, Sir Clifford Allbutt summed up the whole question thus:

> Even in the sketch of our present occupations it is hard to avoid the subject of psycho-therapy, though I would gladly do so. Of late this pursuit has stirred up much mud and once more the human heart is declared to be a very messy place. Perhaps we make it still more messy by talking so much about it, by making it a storm centre of faddism. Of transcendental psycho-pathology, of Œdipus complexes and their kind I lie in an ignorance, with which as a Philistine I am content. A distinguished professor in another field of whom I inquired concerning certain transcendentalists of his own science, answered and said: "Of their opinions I can give no judgement, for I have not soared into their regions; I can only say that when perchance they stray within my orbit, they are generally wrong." The psycho-analysts may in their own regions be great prophets, but when they come within ken they seem, to my presumption, to be vulnerable. The reader who in his own field has been wont to look for definition of terms and for precision and economy of language, may think he sees in them loose thinking, vague outlines and formless pseudo-scientific verbiage—volumes of what undergraduates and others call "gas." There is the man who gets ahead of us by calling the mind "mentality," whose instinct prompts him generally to avoid facts by making his nouns more and more abstract. If painfully the reader tries to render recent psycho-analytic paragraphs into stricter terms, he finds himself coming back to little more than Locke told the world three hundred years ago. Many, indeed, of their postulates seem shaky. For instance, one cardinal, or at any rate dominant, axiom is that the sexual is the strongest instinct of mankind and therefore a common denominator. But is it so? Offhand I should guess that self-preservation is stronger and for herding animals the gregarious instinct yet stronger than either.

As this meeting to-night is one of medical men and women who are more or less conversant with the theories of Freud, Adler Jung, Ernest Jones of Toronto, Haydn Brown and others, it is not necessary to outline any of the varieties of psycho-therapeutics. To my mind they are all different names for suggestion, which is *par excellence* the best treatment for functional nerve disease. When, however, it is claimed, as it is by some, that the sex factor is concerned with the causation of insanity any more than is any other worrying thought acting through the sympathetic and that there is no physical basis in the ætiology of mental diseases, then I can only say that it is the lack of experience which prompts such utterances. Jung has said that "as a rule in *dementia præcox* there is nothing found in the brain *post mortem*" and that "three-quarters of the insane patients have a brain which seems to be generally unimpaired or at most exhibits such changes as give no explanation of the psychologic disturbance" and that "the psychiatry of the future can be studied and explained by way of psychology only." Other psycho-analysts write in the same strain also. This teaching has obtained a footing among medical men in Victoria as well as in other parts of the world and it is with the intention of disproving these statements that this paper is read this evening. There is a saying in legal circles that when you have a poor case, abuse the other side. I hope you will not consider me guilty of this in the first part of my paper, where I have to discredit the arguments of the psycho-pathologists before I can put the physical side of the question to you.

The Psycho-Pathological Basis.

The psycho-pathologists appear to regard insanity and the neuroses as the same disease, because they attribute the same cause to both conditions, *i.e.*, the hidden complex causing the conflict, and the method of cure by psycho-analysis the same in both diseases. This appears to me to be tantamount to saying that Löffler's bacillus can be responsible for tuberculosis and cerebro-spinal meningitis, as well as for diphtheria, and the treatment for the three diseases diphtheria antitoxin.

As mentioned before, the theories of the psycho-analysts and the different modes of treatment by psycho-theraputics have altered with every change in the moon, the accepted theory of to-day being discarded for the theory of the morrow. The ordinary individual has neither the money to spare for buying these books, nor the time to read them properly. One comes to read in successive publications of the *libido* being changed from the sexual to the hedonistic or pleasure-seeking and then to the power hunger type (a very expansile kind of *libido*), which *libido* in plain English is the old-fashioned "ax to grind." We all recognize that this protean "ax to grind" is well exemplified in hysterical nerve diseases. I think it was Sir John Collie who said that the hysterical patient was an unconscious malin-

[1] Read at a meeting of the Section of Neurology and Psychiatry of the Victorian Branch of the British Medical Association on June 26, 1922.

gerer. This unconscious "ax to grind," or shall we call it *libido*, is the auto-suggestion which is best treated by hetero-suggestion or any other kind of suggestion that is capable of disposing of the original one. Sir John Collie called hysteria unconscious malingering and malingering is the aping of some disease in order to "grind an ax," such as acquiring exemption from some duty or an effort to avoid the ordinary difficulties of this life. Nobody who knows an insane person, would accuse him of "scrabbling on the door step" to pretend insanity, like the Jewish king, David, in order to be incarcerated in an asylum. David wanted to be thought insane (the *libido* conscious in his case); our mental patients want to be thought sane and allowed out of the mental hospitals.

The psycho-analysts affirm that psycho-analysis is not suggestion, but I maintain that if a psycho-analyst tells a patient to come to his surgery, when that patient arrives and is told to lie or sit quiet and submit to a certain performance, that patient associates the idea of cure with that procedure and the suggestion is present from the commencement. A toddling child bumps its head on the edge of a table and is cured by running to the mother who kisses the injured spot. Why? Because on previous occasions the mother has said: "Never mind, mummie will kiss it and make it better." When house surgeon at the Alfred Hospital, I cured a headache merely by placing a thermometer for half a minute between the lips of a young man who had never seen a thermometer. He had expected some relief from a doctor and he had obtained it in the same manner as the patient who consults the psycho-analyst, that is, by suggestion. Perhaps the Freudists will consider the thermometer as a phallic symbol and possessing some curative value in this case other than that as a guide to temperature. Yealland, in his book, "Hysterical Disorders of War," has shown recently (and Buzzard vouches for the work done) how the most obstinate war psycho-neuroses, with paralyses, blindness and other equally serious neuro-mimetic phenomena, have yielded to suggestion when the suggestion supplied is stronger than the suggestion responsible for the functional disturbance. The writers on psycho-pathology, by their own accounts, appear to spend months in accomplishing what Yealland achieves in one crowded hour with the aid of a strong Faradic current and an adamant determination. The psycho-pathologists infer that insanity can be cured by psycho-analysis, yet, as a matter of fact, all the cases they report as cures are practically psycho-neuroses and therefore capable of being treated successfully by suggestion in some form.

Suggestion has no more curative power in insanity than it has in acute rheumatism or any other visceral disease; I doubt if it has as much, because in visceral disease the comforting and reassuring words of a medical attendant go a long way to securing sleep and consequent rest, whereas in mental patients it is very difficult to apply suggestion. The attitude of the mental patient towards his medical attendant is totally different from that of the patient who voluntarily seeks the medical attendant's advice, which is probably the reason why words of comfort and assurance appear to fall on deaf ears.

In cases of insanity in which the stress is grief, financial worry and unrequited love (the stage name for seduction), if suggestion were applied before the sympathetic system had disturbed the endocrines and other glands, it would be reasonable to believe that insanity might be averted. This is, however, an argument in favour of the physical basis of insanity, because in a person with a vulnerable neurone the alteration in the economy produced by sympathetic over-action will react adversely on the cortex and produce the "alteration of the ego." Compare the normal sadness of sane grief with the morbid depression of the insane. The former can change to joy immediately, but the latter takes days to recover.

Some time ago at the Hospital for Insane at Kew I slowly anæsthetized a patient suffering from *dementia præcox* to see the effect of cortical stimulation by ether and of suggestion upon a condition of mutism which had existed for a year or two. The patient was a young man, physically alert, the most striking feature of his conduct being mutism and a broad grin when under observation. He knew enough to make a successful escape one day, so I was not working upon what is known in Kew parlance as a "blob." I thought that during the induction of and during the recovery from the anæsthetic I might hear him speak of his own accord or get him to answer a question abruptly asked. I rammed in all the suggestion I could to the effect that he could and would speak, but I obtained no better results than the priests of Baal. Previous experience in anæsthetics has taught me that early ether anæsthesia has a tendency to make patients speak and I thought (but I am not so sure of my ground in this) that suggestion in light anæsthesia would be as favourable as in light ordinary sleep.

As I saw not the least movements suggestive of any attempt to speak all the time the experiment was progressing, I concluded that the neurones controlling the speech centre were damaged. This result is in keeping with Mott's latest work on *dementia præcox*, in which he says that the changes in the central nervous system consist essentially in decay and degeneration of the neurones, the nucleus and cytoplasm being involved without any notable change in the supporting tissues or vessel.

Recovery from functional diseases is remarkable for its suddenness in contrast with the recovery from insanity, where, according to Mott, the nuclear ferment builds up the damaged tigroid bodies from the cytoplasm. This rebuilding of the tigroid substance, which is intimately associated with the energy of the cell, takes time. Contrast the slowness of the recovery from insanity with the suddenness of the Lourdes shrine miracles, or, to come nearer home, with the sudden recovery of speech which occurred when a returned soldier picnicking at Heidelberg trod upon a snake. It is not recorded what the soldier's first words were. As the snake is regarded by the Freudists as a phallic symbol, that school may yet claim the cure as theirs. During fifteen

years' close association with the Victorian Lunacy Department I have seen and heard of only one sudden cure in insanity and in that case the patient had come to Yarra Bend after an operation for removal of the ovaries and her physical condition was so low that it was difficult to distinguish the physical from the mental weakness. In the psycho-neuroses the suddenness of the cure is possible, because there is no damage to the neurone, whilst in the insane the neurone is damaged temporarily or permanently.

It seems to me that the reason the psycho-pathologists consider the psycho-neuroses and insanity identical, from a working point of view at any rate, is because on the whole the behaviour of patients suffering from the psycho-neuroses is more like insane behaviour than that of any other disease.

In addition to this confusing of the two conditions we find an insidious attempt on the part of the psycho-pathologists unjustifiably to claim successful results from the application of psycho-analysis to the two conditions. Thus, Ernest Jones, of Toronto, in the second edition of his book called "Psycho-analysis" says: "Up till the present psycho-neuroses have been treated better than the psychoses, such as *dementia præcox*, but there it has already proved so valuable that one is justified in entertaining the hope that further researches may be profitable from this point of view in the case of the latter group also." Now it is over twenty-five years since psycho-analysis was introduced by Freud, so if this is all the progress that psycho-analysis has made in that time, its claim as a therapeutic agent in the treatment of insanity cannot be seriously entertained. The reason is obvious. The psycho-neuroses to which suggestion under the name of psycho-analysis can be beneficially applied, are caused by ideas controlling the mind or, in other words, by auto-suggestion and yield to suggestion however applied; but insanity is not a functional disease and this is the reason why it does not respond to any such treatment.

After devoting pages and chapters of his book to the discussion of dreams, hypnogogic states, neuroses, psycho-neuroses and other manifestations of a functional nature and advising the same treatment in every case, according to the special variety of suggestion he advocates (whether it be psycho-analysis, neuro-induction or auto-suggestion), the psycho-pathologist puts in a chapter on the psychoses. This chapter is usually the poorest part of the book, non-committal, but worded so subtly as to lead the reader to believe that he can obtain in insanity the same results by the method advocated as he obtained in the functional nerve disturbances. The psycho-pathologists discuss the psycho-neuroses and insanity just as if the two conditions were caused by the so-called conflict between the subliminal and the conscious and then relate how these conditions yield to psycho-analysis, but the instances they spread themselves over, are purely functional nerve conditions.

Some of the statements made by the followers of psycho-analysis appear to me to be absolutely ridiculous. Jung attributes the wetting of the bed by a little boy to an incestuous idea directed towards his mother. Stoddart's book mentions that the holding back (constipation) of its fæces is in the infant the basis of an economical instinct in the adult, the fæces being the symbol of money in the Freudist theory. Ernest Jones, of Toronto, says that the tendency to expose the genitalia in infancy becomes sublimated into the desire to stand before an audience as a platform singer or orator, but if not sublimated becomes the indecent exposure of the pervert. He also states that infantile sexual excitation in the region of the anal canal produces certain traits of character later on in life. The fact that children always take such an interest in matters pertaining to micturition and defæcation and those parts of the body set apart for those functions is regarded by some as lending support to the sexual complex theory of the neuroses and the psychoses. It must not be overlooked that the child is "naked and unashamed" and consequently talks quite openly about the things which interest it, but when the teachings of the parents and the mental changes that acompany the onset of puberty, take the place of the symbolic "tree of knowledge," the girl knows that modesty is her only protection and in races with social customs established the man respects that modesty. Nature has implanted in every form of life at birth an instinctive interest in these special regions. Certain odoriferous glands are located there in many animals for that purpose. The common cloaca which subserves the common orifice in lower forms of animal for all these functions, associates the sex instinct with the excretory functions, so that the child takes time to learn the differentiation between them. The interest in sexual matters is in the adult just as in the child, only with more enlightenment on the subject, but by common consent, as in all social laws, except in the savage and the coarser types of society, they are not openly mentioned. Compare this with the reticence that civilized people have in talking about their feelings towards the Almighty. No person with any finer feelings discusses his love for his wife. People do not wear their hearts on their coat sleeves. This interest in micturition and defæcation on the part of the child, in my opinion, has no claim as the basis of the complex conflict theory. Jung states that "three-quarters of the insane patients have a brain which seems to be generally unimpaired" and Ernest Jones, of Toronto, criticizes Lugaro's book, entitled "Modern Problems of Psychiatry," thus: "The volume is chiefly concerned with problems of chemistry and morbid anatomy and advocates a tendency in psychiatry, the relative fruitlessness of which I have disparagingly contrasted with that pursued by Freud." This statement I consider absolutely incorrect and maintain that the work of Mott, Bolton,Lugaro, Bevan Lewis, Lewis Bruce and others of recognized authority represents the true explanation of psychiatry, which is that insanity is due to changes in the brain tissue.

The Physical Basis.

Having given my reasons for refusing to accept the psycho-pathological explanation of the ætiology of insanity, I will now present the physical basis of

insanity. The materialists accept as the ætiology of insanity two causes—a predisposing cause or vulnerability of the neurone and an exciting factor or stress. The first is determined for the individual before birth and depends upon his parentage, the second is any factor which interferes with the nutrition of the neurones. The stress may be bacterial or metabolic toxæmia, deprivation of oxygen through anæmia, starvation of the neurones by arterio-sclerotic disease blocking the blood vessels, alteration of the constituents of the blood plasma through disturbance of the endocrines by sympathetic overstimulation, worry, grief and other psychical disturbances which (like the old ordeal by rice acting through the sympathetic system) dry up gland secretion producing intestinal putrefaction and incompetency of the liver and kidney to cope with normal waste products; in short, any factor which weakens the health of a neurone incapable of withstanding the ordinary stresses of human existence. The brains of those with this inheritance of neuronic vulnerability may be likened to a series of combustible fluids with different "flashing" or "flash" points. To be safe for burning in a lamp, kerosene must have a "flash point" above the temperature to which the kerosene in the lamp during ordinary use must be raised, otherwise there would be an explosion. Some brains have a low "flash point," which means that the individual must live an existence as free from stress as is possible in order to prevent a breakdown. Others have a "flash point" high enough for the ordinary stresses of life, but not high enough for severe stress. The first result of the stress is chromatolysis, in which the tigroid bodies or Nissl's granules disappear from the nerve cell, the whole staining diffusely. The nucleus swells and moves to the surface of the cell. This chromatolysis can be recovered from in time by the nuclear ferment building up the tigroid substance from chromatin lipoids or, if the stress is not relieved, the condition may go on to the destruction of the neuro-fibrils and extrusion of the nucleus, leaving the original cell a poorly staining dead shadow cell to be absorbed probably by neuroglial cells which act as scavengers. This complete destruction of the cell or achromatolysis means dementia or permanent mental enfeeblement. Following the rule that the last to come is the first to go, we find that the cells governing the association fibres and the highest mental attributes show the first symptoms and the individual who previously was intellectual and possessed fine mental qualities, now loses all these and is controlled more by his organic instincts. Those who have lived with the chronic insane, will appreciate how well this is exemplified in the working patients in hospitals for the insane.

It has been unfortunate for the better understanding of insanity that with few exceptions (among which can be included the work of Dr. John Turner, of the Brentwood Asylum, England) most of the macroscopical and microscopical examination of clinical varieties of insanity appears to have been restricted to the central nervous system and the importance of obtaining a record of the changes in the other parts of the body in similar types of insanity has been overlooked. Dr. Turner states that he examined the pathological changes in the brain, kidneys, liver and blood vessels of the insane. He states: "The results showed in what a large proportion changes, chiefly of a degenerative character, or evidence of lack of normal development occur in insane cases, even among the young and recently insane." I was struck by the lack of interest in the other organs which workers in laboratories on the other side of the world showed, and when I had sufficient cases to make it of any value, I commenced making synopses of the *post mortem* findings in the other parts of the bodies of persons dying from different types of insanity. As some of you know, I always find in *dementia præcox* a toughness of kidney, spleen and liver, with a thickening of the peritoneum which gives to the surface of the liver a marbled pattern. This I firmly believe is of syphilitic origin. Besides the neuronic degeneration not involving membranes and vessels, Mott has recently published an account of his latest finding in this disease, namely, regressive atrophy in the testes and ovaries. That the liver and kidneys are most important in our economy for the successful treatment of toxins is a well-recognized fact and the toxæmic nature of the symptoms in *dementia præcox* is well recognized in psychiatrical circles, therefore I venture to suggest that the cause of *dementia præcox* is toxæmia due to disease of liver and kidneys in an individual with vulnerable neurones, the toxin causing the microscopical changes in the brain tissue, which gradually becomes more and more altered as the disease advances to dementia, when macroscopical changes become evident. Having made many *post mortem* examinations on patients who had suffered from *dementia præcox* in early and late stages, I can say that the brain in the early stages, when the mental condition is that of confusion and suppression, shows microscopical alteration of tissue without wasting; but when the patient passes into the demented stage, the brain shows evidence of considerable wasting.

The major part of the brain is unmapped in regard to function, so that in any particular type of insanity the changes in certain mental qualities cannot be referred to alteration in any particular group of cells, as happens, for example, in the diseases of other parts of the body, where destruction of certain elements means loss of some function with results unfavourable to the individual. Thanks to Bolton, Head, Elliot Smith and others we know that the prefrontal area is intimately connected with the higher sentiments which distinguish man from the animals, and that the cortex as a whole is the hallmark of intelligence in the animal kingdom. Interference with the health of these neurones therefore cannot fail to produce "alteration of the ego." It is inexplicable how any medical man accustomed to microscopical and macroscopical appearances of the insane brain could make such a statement as Jung when he says: "Pathology had little to offer the psychiatrist until Freud advanced his theory, therefore the physical origin of mental diseases has been disregarded in favour of the psychological explanation." I often wonder what Jung thought was the cause of the mental depression during a bilious attack or of the fact that on some days his mind was

brighter and more alert than on others. That should have made him suspect a physical factor.

As might be expected, amongst almost two thousand patients on whom I have performed *post mortem* examinations, there were some who died soon after reception. The medical officers who examined them, entered up the mental symptoms in detail and in some cases the physical health had been entered up as "good." As far as could be detected by the usual methods of examination, the health had been good. All these patients showed at *post mortem* examination, in addition to the primary cause of death, some chronic disease of other parts of the body which must have been a handicap to the proper working of the economy and which had at last exerted its ill-effect upon the vulnerable nerve cells of the prefrontal area and association areas, which are the first to be affected. An example of this apparently good physical health in the insane when in reality the patient is seriously diseased, is seen sometimes in the early general paralytic, who, in spite of the myriads of spirochætes in his body, is sometimes so buoyed up by his exaggerated *bien être* that he presents the picture of good health. The great majority of the recently insane, however, have an unhealthy appearance, whether stethoscopic or other evidence detects physical signs of disease or not, the unhealthy appearance being a muddiness or pallor of the skin similar to that of the ordinary sane dyspeptic. No one would challenge the diagnosis of ill-health in a woman recently received suffering from puerperal insanity, whereas a man suffering from early general paralysis of the insane may appear to be in good health. Thus we have two conditions of mental derangement, in one of which the patient appears ill and in the other well, yet all the time both are really ill and, all things being equal, the prognosis in the case of the sicker looking individual is better than in the case of the patient in apparently good health. In passing, I might draw your attention to the fact that neither Jung, nor Ernest Jones, nor Haydn Brown nor any of the others appear to bother about mentioning such things as Wassermann tests or examination of urine. Even in the case of functional disease there are surely necessary. What does all this lead to? That the insane patient is a physically sick as well as a mentally sick patient.

The difficulties in obtaining heredity charts in the insane are admittedly very tangible. The investigator is met by ignorance, cunning and wilful misrepresentation and there are many side issues in every case of insanity which do not obtrude themselves in cases of physical illness. If the relatives on one side of the family are at variance with the other side, we may get "the truth, the whole truth and more than the truth," or in other cases we get genuine ignorance concerning the other members of the family, which is a good example of that lack of herd instinct or family cohesion so frequently met with in families showing phyletic degeneration. Made wise by previous experience in dealing with patients' relatives who have wilfully kept back information till the very last, I make it a rule to approach the subject as if it were already a known fact that hereditary influences are present. This procedure is very successful in disclosing the defective member of the family whom the examinee may have kept quiet about, labouring under the idea that it is a disgrace or that some disadvantage may follow the family or that the patient's chances of recovery should be lessened if it became known. A great number of general paralytics show hereditary influences in their charts and this appears to explain why only a certain number of syphilitics develope general paralysis of the insane and other varieties of syphilis of the central nervous system. In fact, Overbeck-Wright, of India, considers that general paralysis of the insane is two diseases, the one a physical disease and the other an attack of some form of insanity, but it is only rarely that cases uncomplicated by mental symptoms are met with. This may be the explanation of a number of instances in the *post mortem* room where the clinical picture had not been typically that of general paralysis of the insane and the *post mortem* findings were the typical changes met with in general paralysis of the insane and *vice versa*. Gregg, in the *Boston Medical Journal* (1915), suggests that only a certain type of individual is susceptible to general paralysis of the insane. Goodall, in *The Lancet* (1914), suggested a special variety of spirochæte with affinities for the central nervous system, while others say that neuropathic inheritance is the determining cause. Our work here in Victoria supports the influence of heredity in making general paralytics out of patients suffering from syphilis. A male patient was received into Yarra Bend suffering from secondary syphilis. Fourteen years afterwards I made a *post mortem* examination on him and found changes of a general paralytic nature and the notes of the case showed that for some time prior to his death he had shown clinical signs of that disease. He was not suffering from general paralysis of the insane on reception and had not been out of the institution since he had been first admitted there fourteen years previously. His sister is a patient in the Hospital for Insane, Ballaarat, but is not a general paralytic. Within the last two or three years there have been three interesting patients in the Idiot Cottages, Kew. They are good examples of the close association between general paralysis of the insane and neuropathic inheritance. One is a juvenile general paralytic whose father died from general paralysis of the insane in Yarra Bend. Another is a juvenile general paralytic whose mother died in Yarra Bend from general paralysis and the third is a cheerful, useful, working imbecile whose mother died in Yarra Bend from general paralysis of the insane. To be fair, I must tell you that Dr. McLaren, of Korea, told me that, although syphilis is rife in China, yet it is only lately in the towns that have come in contact with western civilization that general paralysis of the insane is found.

Although Gregor Mendel's rules of numerical proportion in heredity cannot be applied to the human subject in insanity, yet it is possible to trace the transmission of the vulnerability through generations.

The opponents of the physical school say that the materialist theory breaks down when shock and be-

reavement are the cause of the mental derangement. One has only to look upon the effect of strong emotions upon the sympathetic system controlling the glands and involuntary musculature of the body to realize how emotions can interfere with those splanchnic tissues the correct functioning of which is indispensable to good health and, as I have said before, good health is indispensable to normal mind in those with vulnerable neurones. We know that there are certain gland secretions which are essential to bodily welfare and if these are not available, alterations in body or mind or both result, as, for example, in *myxœdema strumipriva*, complete oöphorectomy, Addison's disease, complete castration, etc.. At the time of the menopause women of all grades of society have certain nervous symptoms which are accompanied by atrophic changes in the genital organs, physical appearance and mind. Ovulation ceases and no *corpora lutea* result. The administration of *corpora lutea* ameliorates these symptoms, when they become too severe, until the body and brain become adjusted to the new life. Sometimes women cannot pass through this disturbance without becoming insane, especially if there is any heredity present, and in the *post mortem* examinations of those who have died shortly after reception, I have found chronic degenerative changes in the kidneys, which appear as if the strain of menopause *plus* the kidney disease was too much for the predisposed nerve cells.

In epileptics with insanity I find in practically every instance fibrotic changes in the liver, kidneys and spleen, with dilatation of the stomach and enlargement of the mesenteric glands. The sclerosis of the brain, especially that of the *cornu ammonis*, occurs frequently. Whether these fibrotic changes are contributory to the fits by hindering the functions of those viscera or whether they are produced by the same factor, *e.g.*, a toxin which causes the fit, has not yet been determined.

It is quite enough to see the effects of worry, anxiety and grief upon the general health of an individual, without having to go out of the way to lay the blame on some conflict between the patient's subconscious and conscious. Ernest Jones, of Toronto, says in the second edition of his book called "Psycho-analysis": "Insanity presents a picture of the normal unconscious" (unconscious in this sense meaning repressed wishes). Suppose for a moment this repressed wish or "ax to grind" acts as it does in functional cases, where would we get our different types of insanity from? In the functional types the clinical pictures do not fall into groups as do the insanities. On the other hand, we can see the insanities falling into clinical groups according to the physical factor at the bottom of the trouble. The symptoms of general paralysis of the insane have a certain tendency to resemble each other, making all allowances for creed and status in life; the insanity of exhaustion has a confusional type; the insanity associated with an extreme degree of mitral stenosis has a type of its own; the insanity of epilepsy carries with it that typical whinging, importuning irritability of manner so familiar to those who work in mental hospitals; the insanity with tuberculosis has the delusion of persecution; the puerperal insanity has the idea to destroy the child, kill the father and general negativism. The functional diseases cannot show anything similar.

The experiences of the war have shown that in the psycho-neuroses the ideas, memories, suggestions or whatever term we give them are responsible for the neuro-mimetic symptoms. It is not known what actually takes place in the brain tissue to bring about that change, because we are still ignorant of the manner in which brain cells function, but we know empirically that in the practice of hypnosis, if the patient is placed in a position so that fatigue is produced in the eye muscles or in some other manner, that patient can be made to obey certain commands and believe certain ideas, the will of the outsider having control of his mind. In certain states of physical and nerve fatigue a patient's own unconscious ideas or "ax to grind" can dominate the mind and cause imitation of organic disease which the patient regards as truly organic or may, as in some neurasthenics, develope an obsession or imperative idea. There is no mental impairment as in insanity, the "ego" remaining unaltered. On the other hand, the insane patient has distinct change of personality, is not to be persuaded that his health is unsatisfactory (although it may be obviously bad) and expresses his thoughts so openly that, if insanity is as the psycho-analysts say "a picture of the normal unconscious," it would spontaneously cure itself by putting into action that "ventilation of the unconscious" which the psycho-analysts claim to be an infallible cure. When there is such a good example in the idiot with a physical basis for his abnormality of mind, why do the psycho-pathologists deliberately ignore the possibility of a physical basis for acquired insanity?

Pathological Changes of the Insane Brain.

Time will permit only a rough outline of the pathological changes which are found in the insane brain. For fuller description I refer you to the works of Mott, Lugaro, Shaw, Bolton and others.

In the pathology of the insane brain there are two important rules. One is that in insanity with no dementia there is no abnormal wasting of the brain tissue with compensatory changes in the other intracranial contents and the other is that in dementia the brain tissue is wasted and there are compensatory dilatation of the ventricles filled with cerebro-spinal fluid and sometimes œdema of the pia-arachnoid membrane known as external hydrocephalus or *hydrocephalus ex vacuo*. The wasting of the cortex is due to the destruction of the nerve cells and the fibres coming from them. Thus in mania, melancholia, early *dementia præcox*, very early general paralysis of the insane, epilepsy or any other mental condition where there is no dementia, there are no macroscopical changes in the brain itself, although there may be changes in the membranes, vessels and *calvarium*. When, however, dementia commences, the brain cortex begins to shrink and, owing to the rigid nature of the skull, the ventricles dilate and the pia-arachnoid may become œdematous in a compensatory fashion. Microscopical examina-

tion of the brain of patients in whom dementia has not commenced, shows chromatolysis of the nerve cells and a varying blood content. When dementia is present (*i.e.*, permanent feeble-mindedness in an individual previously normal), achromatolysis is seen with irrecoverable destruction of the neurofibrils and the whole structure of the nerve cell and the fibre leading from it. Neuroglial and other cellular elements are increased. A patient can be extremely feeble-minded owing to a recoverable chromatolysis, for example, in confusional and stuporose conditions, or even in the sane after a severe illness, but when the feeble-mindedness is due to achromatolysis, it is a permanent condition, as central nerve tissue destruction is irrecoverable. When the stress has been of some duration, there may be seen changes in the other intracranial contents which may be contributory factors to the impaired nutrition of the cells and fibres, *e.g.*, a thickening of the meninges or vessel walls may cut off blood supply from cells which are only just keeping ahead of chromatolysis or achromatolysis. In patients suffering from recurrent insanity without dementia, who have been exalted, depressed and feeble-minded in succession, the feeble-mindedness is only of a temporary nature and the *post mortem* examination of such patients who have died from some intercurrent illness, such as pneumonia or influenza, shows no sign of wasting. It must be remembered that the size of the skull is indicative of the mass of the normal brain only during the years of its development and that in the sane, after the age of about forty-five years (and at any time in the idiot), the weight gradually decreases, while the ventricles dilate to compensate. Thus the age of the patient must be taken into account in estimating pathological wasting. This normal wasting of the brain is general, while the wasting of dementia is prefrontal and naturally can be best determined in the brains of dements under forty-five years of age.

It is important to remember that the changes of a pathological nature in the vessels, membranes and all intracranial contents other than the nerve tissue must always be considered from either of two standpoints: first, as the cause of the malnutrition of the nerve tissue by interfering with the blood and cerebro-spinal fluid supply of the brain and, secondly, as an accompanying pathological condition due to the same cause which has unfavourably affected the nerve cells. As an example of the first we see an arterio-pathic dement and as an example of the other general paralysis of the insane.

Just as it is impossible to say what particular toxic agent has caused cloudy swelling of the liver by looking at it under the microscope, so it is impossible to say what agent has caused the changes in the neurone in insanity. In general paralysis of the insane, however, the constancy of the changes in the brain and membranes makes the diagnosis macroscopically and microscopically easy, as is also the case in organic dementia with arterio-pathic changes in the cerebral blood vessels and cerebral softenings. In early cases of mania, melancholia and *dementia præcox* it is difficult to determine the clinical picture in the examination of the brain without taking into consideration the changes in the other viscera.

The various changes in the cranial contents other than the nerve tissue are of assistance in investigating the pathology of insanity. The eburnation of the *calvarium*, massive hypertrophy of the inner table and fine honeycomb appearance of the inner table must be considered as due to chronic congestion in the first two and to depressions caused by vascular tufts of *dura mater* in syphilis in the third. The thickness of the dura, the presence of sub-dural deposits and the increased thickness of the basal vessels all have a significance. These non-nerve tissues may show changes which are of long standing, while the duration of the mental disease is recent, having been precipitated by an aggravation of the stress acting adversely upon the nerve tissue. For example, an old man with normal senile wasting of the brain and thickening of the basal vessels developes acute senile mania, the clinical picture of which is that of ordinary mania modified by the presbyphrenia of old age, the mania being probably due to coprostasis or failing efficiency of the kidneys. Another example is the case of a woman of about thirty-five with confusional insanity who dies from exhaustion. At *post mortem* examination a macroscopically normal brain is found with a thickening of the pia-arachnoid, although the mental attack was a brief one. The thick pia-arachnoid points to long-standing irritation due to the cause which ultimately affected the neurones either directly or indirectly through the thickened pia-arachnoid, altering the blood supply of the cortex.

In congenital insanity the presence of physical changes from the normal is indicated from the first by the stigmata of degeneration and the dwarfing of stature. Pathologically there may be distinguished two classes of congenital mental deficiency. The first, the idiot, has a brain so imperfect owing to maldevelopment or damage by disease or injury that it is incapable of any intelligence or response to its surroundings other than reflex. On the other hand, the imbeciles of all grades, ranging from low to the highest (termed morons), suffer from undevelopment of the brain, with simplicity of pattern in the convolutional arrangement and a deficiency in the make-up of the cortical layers and association areas to the intellectual disadvantage of the individual. There is no active brain disease present in the imbecile, the mental symptoms being solely those of deficiency of intellect, associated with a weak control of the primitive instinct. *Post mortem* examination shows that a very large percentage of the congenitally insane are syphilitic, particularly the idiots, and a study of the heredity charts shows that phyletic degeneration is the rule. This phyletic degeneration produces a low standard of living with a weakness for alcohol and other intemperances and a loss of that instinct of family tie which is one of the strongest supports of well-organized society. It is exceptional to find an instance of congenital insanity in a sound heredity chart, except, perhaps, in the case of idiocy due to congenital syphilis. The result of an extensive investigation carried out by me at the Idiot Cottages, Kew, a few years ago shows that a lot of the ætiological factors found in

text-books are fallacies. Consanguinity by itself is not a factor in the production of the unfit and disparity in the ages of parents or too young or too old parentage have nothing to do with causing congenital mental defectives, unless there is an hereditary influence in addition. With the exception of the Mongols the first conceptions are most likely to be born defectives. The syphilitic idiots, of course, can appear anywhere in the family. Mongols have been credited with being the products of exhaustion in the parents, but an investigation showed that, although some of them appear at the tail end of a large family, the greater number were not the last conception. American records show that a big percentage of Mongols give a positive reaction to the Wassermann test, which is strong evidence in favour of a syphilitic factor, because it is hard to obtain a positive response to the Wassermann test in the congenital syphilitic after a few years. There is no more constant physical feature than the slant eyes, rugose tongue, spade hand and foreshortened brain of the Mongol in any other type of disease. Strange to say, there is a Mongol idiot at Kew whose father was a Chinaman. The more one tries to puzzle this condition, the more one is confused. It almost suggests that there is a sport reversion to an inferior type of human being.

The question of whether the patient was born at full term does not appear to have any bearing on the determination of congenital insanity. Inquiries concerning accident or illness of the mother during gestation show that these factors were not frequent in the histories of these cases. Difficult births were not of unusual frequency and more boys than girls were born insane, which has been stated by some authorities to be due to the larger head of the male child, an opinion with which I do not agree. Of the patients examined for heredity charting, 42% were epileptic or had a history of previous epilepsy. Syphilis, tuberculosis, cancer, insanity and drunkenness appear with unusual incidence in the heredity charts of the congenitally mental defective.

Exception has been taken to the study of the pathology of psychiatry by the *post mortem* examination of the brain microscopically and macroscopically and it has been suggested that the study should be by comparison of the patient's mind with other minds regarded as normal. The answer to this is that, as the changes observed in the insane brain are always controlled by comparison with the normal, just as in visceral pathology, they have as much a right to be accepted as the physical basis of the mental disturbance as the change in the posterior column of a locomotor ataxic has as being the pathological change in that disease. The comparison of the insane mind with the normal is not studying the pathology of the disease. It is merely recording the clinical signs of the disease or, in other words, merely recording how much the patient differs from the normal. The *post mortem* results and clinical signs must be studied together.

In conclusion, let me beg those who have not had opportunities for seeing the pathological changes in the insane brain to refrain from accepting the psycho-pathologists' ideas, until they have read the work done by the authorities I have already mentioned this evening. Esquirol said that no man can understand insanity unless he has lived with the insane. I would like to add that no man has any right to reject the physical basis of insanity until he has cut and examined sections of the sane and insane brains, as well as studied the macroscopical findings in different insanities.

THE THERAPEUTIC VALUE OF THE ARSENO-BENZOL DRUGS.[1]

By Harold Rischbieth, M.A., M.D., B.Ch. (Camb.), F.R.C.S. (England),
Adelaide.

During the last six years I have been responsible, either as surgeon in charge of the clinic for syphilis at the Adelaide Hospital or as Honorary Surgeon to the Adelaide Children's Hospital or in my private clinic for the administration of the following arseno-benzol derivatives and the following number of tubes: (1) Galyl, 270 tubes; (2) di-sodo luargol, 1,470 tubes; (3) neo-kharsivan, 1,350 tubes; (4) arseno-benzol, 1,679 tubes; (5) nov-arseno-benzol (Billon), 3,856 tubes. The figures are approximate. The doses vary in size. The total number is 8,625 approximately. All but about one hundred of these doses are given by intravenous injection; the others intramuscularly. Almost all the patients were ambulatory. These drugs differ considerably in therapeutic effects and in toxicity.

I have ceased to use any of the first three drugs. For, although they all cause the rapid disappearance of symptoms or obvious lesions, experience and observation have shown that all three are unreliable in a considerable proportion of cases in permanent effect upon the Wassermann reaction, that is to say, in inducing a permanent disappearance of the positive reaction.

As regards the drugs of Groups (1), (2) and (3) there were no accidents and no deaths. There was no evidence of toxic effects beyond slight reaction in a few (three or four) patients (as shown by a rigor and vomiting) in a series of approximately 3,090 administrations. Such reactions were transient and slight.

As regards the drugs of Groups (4) and (5), I now use no other preparations than arseno-benzol and nov-arseno-benzol (Billon). Of these there have been 5,535 administrations approximately.

Of the two it appears to me that the first is the more potent therapeutically, but the more toxic. It is more troublesome to prepare and gives rise to more reactions, if anything, than nov-arseno-benzol. There have been no accidents and no deaths in the 5,535 administrations.

But there have been the following instances of (presumably toxic) undesirable after-effects:

(1) Exfoliative dermatitis, three cases.

(2) Less severe generalized eruptions, approximating to Herxheimer's reaction, three cases.

[1] This article is based on a reply to an inquiry instituted by the *Office Internationale d'Hygiène Publique* in Paris.

(3) *Herpes facialis*, three cases; *herpes zoster*, three cases.

(4) Jaundice, five cases. (This cleared up in two or three weeks without special treatment.)

(5) Physical collapse with slow pulse (under 60) occurred in three patients. Recumbency for a few minutes was restorative. One of these patients was inebriated at the time. Another was a Jewess. The third was a Pole. Two of the three had subsequent injections in fourteen days' time without any bad after-effect; the third decamped.

(6) During the last six months there have been five instances of erythema, general or local, with pruritis which appeared from one to three days after injection. It is possible that injection produced it. But the condition is so common in this part of the world, as in any other, from other causes, *e.g.*, presumably climatic, that I doubt it.

(7) Somewhat severe reactions, as shown by rigors, vomiting and diarrhœa. These have been observed. But they are uncommon. I could number such instances in the last three years on the fingers of one hand.

The maximum number of doses to one patient was fifty-seven. The preparations were given intravenously in doses of 0.6 or 0.9 gramme in about equal numbers, spread over about twelve months. There was no evidence of severe reaction, except in one instance, the last. The patient was a male of fifty-six with an infection of something over twenty-five years' standing.

A little girl of nine years had ten intravenous injections of 0.6 gramme in five weeks. No reaction occurred from any.

In regard to the minimum number of doses given to one patient, that is, with attainment of desired effect, a permanent disappearance of the positive Wassermann reaction, the following may be stated: A woman in the eighth month of pregnancy, with generalized secondary syphilitic eruption, received five intravenous injections of arseno-benzol of 0.6 gramme each. Both her serum and that of her child yielded no response to the Wassermann test continuously for four and a half years thereafter.

I have been convinced for a long time from clinical and serological observation, although I cannot prove the point, that different samples of these drugs differ (*i.*) in therapeutic value and (*ii.*) in toxicity.

The nov-arseno-billon, with which we are supplied here, now has less therapeutic value than that of, say, two years ago. It requires larger doses and more of them to produce the same effect. I do not think, on the other hand, that the toxicity is more. I feel sure it is less.

These drugs have been employed in almost every type of syphilitic lesion except perhaps disease of the circulatory system. Thus cases of primary, secondary and tertiary syphilis, congenital syphilis, syphilis of bones and joints and syphilis of the central nervous system have been treated in considerable numbers. For instance, they were employed for multiple gummata in an infection of forty years' duration in an old man, in other lesions of thirty years', twenty years', fourteen years' duration, etc., and in congenital syphilis of twenty-eight years' and of twenty-one years' duration.

In all these cases the positive response to the Wassermann test disappeared and apparently remained absent. There has only been one patient in whom at the end of treatment a positive reaction of the blood still persisted. This patient was suffering from cerebral syphilis in an infection of twenty-five years' duration. The reaction of the blood serum disappeared under treatment; it then reappeared while the patient was still under treatment. The response of the cerebro-spinal fluid had remained continuously positive. Treatment was then given up, for the patient had had fifty-seven injections. In all these patients treatment by mercurial injection of grey oil or by inunction or by the mouth and by potassium iodide is carried on at the same time, in some instances for as long as three years.

All patients with primary, secondary and tertiary or congenital syphilis are treated with the same objective in view, namely, to obtain a permanent absence of response to the Wassermann test, independent of absence of symptoms.

After treatment is thought sufficient and has ceased, it is the routine to have the blood serum tested for a Wassermann complement fixation reaction at regular intervals for three years. It is only when the serum has continuously failed to yield a reaction for this time, *viz.*, three years, that the patient is dismissed. This routine is not always carried out by patients; but it is what is asked of them and what is aimed at.

By this means we have, I think, obtained a fairly accurate estimate as to permanency of results or otherwise.

Reactions to toxic effects may be due to:

(1) Idiosyncrasy of the patient to arsenic.

(2) Too large dosage, either initially or subsequently.

(3) Too short interval between doses.

(4) A highly nervous temperament in the patient, auto-suggestion, suggestion, terror or "fussiness" or lack of tact on the part of the operator.

(5) Alcoholism. (A definite, small, proportion of my patients had been inebriated, more or less, at the time of injection. One of these had a bad reaction under such conditions, with no reaction at previous or subsequent injections.)

(6) Impurities in distilled water employed. (This I look upon as the most important point, apart from overdosage, in the whole administration. We now insist that all distilled water should be redistilled within two hours of use.)

(7) Too large a bulk of solution. We now confine our bulk of solution to ten cubic centimetres. (A few drops of normal saline is used before and after.) In general terms, the smaller the bulk, the fewer the reactions.

(8) Impurities in the drug. I have not seen any case in which I concluded that the bad after-effect was due to this cause or at least in which it might not have been due to faults in technique or in which, indeed, I did not conclude that it was due to fault in technique.

With permission I will quote my worst instance of what I mean. The cases are small in number, but very definite in their showing. On a certain day ten patients were given intravenous injections of nov-arseno-billon. Two of these were private patients. The others attended the public clinic. None of them was being injected for the first time. All had had several injections previously, without notable reactions. In the few days following two developed herpes (*herpes facialis* and *herpes zoster*) and all had a notably worse experience than on previous occasions. The occurrence could be traced to the distilled water, at that time not redistilled. Since then all distilled water has been re-distilled. There was no alteration in dosage or technique, but there has been no similar occurrence for three years, although the size and number of doses per patient has been on the whole considerably increased. In all these cases treatment was resumed after a suitable interval; all the patients completed their course without further trouble. The factors in the production of jaundice may be overdosage, too short interspacing or idiosyncrasy, but I think impurity of distilled water is the most important.

A case of exfoliative dermatitis occurred. This was in a patient with probable general paralysis of the insane. In view of the extreme gravity of that condition the drug was pushed and, as it proved, too far. He was given ten injections of 0.9 gramme of nov-arseno-billon in five weeks. There was considerable clinical improvement and the response to the Wassermann test of the blood serum disappeared. But a further injection was given; then exfoliative dermatitis developed. I do not think this was the fault of the drug, but of the administration of it.

I have grave fault to find with nov-arseno-benzol and with the other drugs. But it is not on the score of toxicity. Unless the technique is in one way or another at fault that is *une quantité négligeable*. It is because their original therapeutic promise has not been fulfilled. They or rather it no longer gives such permanent good results. In the specimens that we obtain here larger doses and more of them are required to produce the desired disappearance of the response to the Wassermann test than formerly. And the proportion in which the alteration of the serum is not permanent, is increasing.

It is conceivable that we are dealing with a more virulent strain of *Spirochæta pallida* than formerly or a type of patient with lesser powers of resistance. But by reason of experience in other directions I do not think so. Tubes of the same batch seem to have about the same therapeutic value. But the batches vary in this respect.

The therapeutic value of specimens of the same drug varies from time to time and I can only conclude, as the result of my clinical observation, that it is becoming less and less. By analogies in other directions one can only suspect that this may be the result of strivings after cheapness in production. I think this should be remedied.

Reviews.

A NEW QUARTERLY REVIEW.

In May, 1922, a new quarterly publication was issued under the title *Medicine*, in the form of a magazine. The object of this publication is to provide critical reviews written by competent authorities on special subjects in internal medicine, neurology and pædiatrics. The editors are Dr. David L. Edsall, of the Harvard Medical School, and Dr. John Howland, of the Johns Hopkins Medical School, with Dr. Paul D. White, of the Massachusetts General Hospital, as associate editor. The publishers are Williams & Wilkins Company, of Baltimore. It is the intention of the proprietors to produce four numbers to each volume and to offer the volume to the medical profession for five dollars, with an additional fifty cents for postage outside America. The agents in Australia are Stirling & Company, 317, Collins Street, Melbourne, and Mr. G. Jervis Manton, of Melbourne, Sydney and Brisbane.

Number One of Volume One is a stately book of two hundred and twelve pages, crown quarto size, with the now frequent long line. From the point of view of technical printing there are some defects and many inconsistencies. The type, however, is clear and the proof-reading has been controlled with care. The contents comprise two monographs. The first is a work on the knowledge possessed concerning the therapeutic use of digitalis by Professor G. Canby Robinson. The author has produced a monograph of extraordinary value. In the course of one hundred and thirty-seven pages he reveals himself as an astute observer, a first-rate critic, an expert pharmacologist and a man of tolerant views and a broad outlook. To deal adequately with the work would be far too large a task for any medical journal. Each of the fourteen chapters deserves full treatment. Since the space for this notice is limited to a few lines, the reader must be satisfied with a meed of praise and the advice to study this work in order to gain up-to-date knowledge of this interesting chapter in pharmacology. The article covers the pharmacology, not only of digitalis, but also of its active principles and of drugs of the same group. The question of standardization of the preparations is discussed in some detail in view of the fact that, unless uniform methods are employed, it becomes impossible to compare the effects of different or the same preparations in the hands of two or more observers. The main part of the work is devoted to the chemical and physiological studies on the action of digitalis. The author concludes by asserting that when the medical profession learns to regulate the dosage of the preparations and to understand their indications, the great value of this group of drugs will be better appreciated.

The second article is entitled "The Treatment of Meningococcus Meningitis" by Dr. Kenneth D. Blackfan. While the author has performed his task with skill, he has not succeeded in producing as fine a result as Professor Robinson. He has, however, treated his subject with fairness and some judgement and has taken a broad view of the current literature. His conclusions in regard to the action of anti-meningococcic serum in the treatment of this form of meningitis are not convincing and appeal to the critical reader as an interim report rather than as a scientific appraisement of a problem that has been probed to the bottom. Final cause argument is still commonly applied in therapeutics, but it necessarily lacks in didactic force, as it is not based on irrefutable evidence. Moreover, it is more important to establish a mode of action and the physiological changes induced by the therapeutic agent than to record the fate of a few patients who have been subjected to a variety of influences, including that of the therapeutic preparation in question. Dr. Blackfan seems inclined to be influenced by apparent effects. His work, however, is good and may be read with advantage by earnest students of clinical medicine.

The first instalment of *Medicine* is so excellent that the medical profession is justified in looking for real guidance from its pages in the future. We congratulate the editors on their selection of authors and subjects.

The Medical Journal of Australia

SATURDAY, OCTOBER 21, 1922.

The Medical Curriculum.

The General Medical Council issued in May of this year a document dealing with professional education in medicine. The importance of this document, which has been reproduced in these columns three weeks ago, will be evident to all interested in the training of students for a professional career in medicine. It will be recognized that the General Medical Council has no direct authority over the medical schools outside the United Kingdom. The Council, however, has the right to determine the conditions under which degrees may be granted by the Universities of the overseas dominions if it is required that these degrees shall be recognized for the purpose of reciprocal registration at home and in the dominions. The tenor of the resolutions and recommendations is dignified and restrained, but it may be assumed that the Council will not assent to a curriculum or to a system of examinations based on antiquated principles. The three medical schools in Australia have resisted up to the present the reforms that have been suggested in various parts of the Empire during the past few years.

The requirements of the General Medical Council include several radical changes in the educational scheme. The majority of these changes were included in the recommendations of a committee of this journal three years ago. In the first place it is laid down that elementary physics and elementary chemistry shall be studied prior to registration as a student. It is essential that the scheme of education shall be so planned that practitioners of medicine may be known as persons of scientific attainments and of a high standard of general education. The profession may not deteriorate into a trade. Unless a high standard of general knowledge is adopted, there will be a tendency for its members to go through life with a scanty technical equipment. Medicine is said to be a learned profession and in consequence its practitioners must possess information far beyond the confines of medical science. A knowledge of elementary physics and chemistry is essential. Would it be too much to require that students before registration should provide evidence that they have a thorough acquaintance with their own and at least one other language and an understanding of the arts?

The second point to which attention should be drawn, is the rearrangement of certain subjects. The student is to be required to take a course of elementary bacteriology before he is brought in contact with patients. In other words, it is at last recognized that it is necessary to regard the study of bacteria and of protozoa as part of biology and to introduce the student to the lower forms of life before he is required to consider them in relation to man. On the other hand, the absurdity of teaching students the use of drugs for disease before they have had an opportunity of ascertaining the nature of the various diseases and the effects they produce on the patients is apparent. For this reason the study of pharmacology and *materia medica* is to be deferred until the student is engaged in clinical work.

Emphasis has been laid in these columns on the importance of associating the study of anatomy and medical physics, chemistry and biology with the living human subject. The structure of a bone and the attachments of muscles to the bone have to be learned in the dissecting room or the laboratory, but a full appreciation of the relation of structure to function cannot be gained until a comparison is made between the dead and the living. The action of a muscle can be demonstrated to advantage if the student is shown the actual contraction of that muscle when the bone is intact and when it is fractured. That demonstrations on the living human body of structure and function are required in connexion with the study of anatomy and physiology is an important advance.

Even more important is the requirement that sufficient opportunities shall be afforded the student for the continued attention to physics, chemistry and biology in their practical application to medicine and surgery. The science of medicine is made up of the application of chemistry, physics and

biology to the human body in health and disease. The term physiology is used to denote the chemical reactions, the physical phenomena and the life processes of the healthy body. It is therefore better to employ the three terms, medical chemistry, medical physics and biology than to retain this composite word. The use of the four terms, as the General Medical Council employs them, is tautology. If the student is to understand disease and to deal with it intelligently, he must translate the processes into terms of chemistry, physics and biology. Up to the present, he was taught these subjects in the first years of the curriculum and then encouraged to forget what he had learned. As a result, the majority of medical practitioners find it difficult to retain a clear conception of such processes as immunity reactions, hormone stimulation or enzymic action. If the fundamental sciences were taught in their application to medical problems throughout the curriculum, the student would have no difficulty in gaining a clearer conception of the significance of disease and of the necessity of forming a pathological rather than a nominal diagnosis.

The last matter to which reference should be made, is the most important. The General Medical Council demands that throughout the whole period of study the attention of the student should be directed by his teachers to the importance of the preventive aspect of medicine. To give effect to this requirement it would be necessary to ascertain whether the teachers at our medical schools have themselves studied preventive medicine with sufficient earnestness to enable them to impart valuable knowledge to the students. The suggestion has been made again and again in this journal that the only logical arrangement of medical education would be the recognition of three fundamental sciences and of three ultimate sciences and that chairs of medical chemistry, medical physics and medical biology and of medicine, surgery and preventive medicine be instituted. If other chairs be desired, they should be subordinate to these six. With proper coordination the three professors in each group could direct the education of the student along sound lines to the benefit of the profession of medicine. The public already realizes that preventive medicine is much more important than curative medicine and that it is a better and more economical proposition to pay for the maintenance of health than for attempts to restore it. To insure success there must be one responsible and competent director, whose duty it would be to guide and coordinate all the teaching of preventive medicine in harmony with the teaching governed by the professors of medicine and surgery. It is obviously futile to expect highly specialized services from men trained and practising in other branches of medicine. It will be noted that the General Medical Council does not stipulate in detail how this teaching of preventive medicine is to be carried out. Perhaps in a short time the recognition of a separate branch of medical science will follow this advocacy. It is not suggested that the chair of preventive medicine should be established for the purpose of enabling the professor to deliver a series of systematic lectures. Real professors should regard the organization of the teaching in their departments as their chief functions; their officers can deliver the necessary lectures. The General Medical Council still desires to retain the systematic lecture. There is much difference of opinion as to the value of systematic lectures. It appears to us that very many valuable hours of the student's life are wasted by the necessity of dozing while someone repeats at a leisurely pace what is set out in every text-book. If the systematic lecture was always an eloquent, living appeal, a powerful lesson inculcating principles with the magnetic force of character, this objection might disappear. As a rule the lecturer finds himself compelled to adapt his remarks to the level of intelligence of his less brilliant students and in his attempt at compromise he fails to exert an hypnotic influence which is the soul of inspired teaching.

THE PATHOLOGY OF OSTEO-ARTHRITIS.

Osteo-arthritis or, as it is sometimes called, *arthritis deformans* is a disease that is common to all races. It is no new development dependent on modern civilization, for it has been known in all periods of history. At the same time, its pathology and ætiology have not been understood. If a search be made in any of the text-books dealing with the subject, it will be found that the question of path-

ology is passed over or treated in a cursory manner by the authors. From the fact that arterio-sclerotic changes are so frequently observed in the course of the disease, it has often been taught that it is a result of these vascular changes, in the same way that some forms of chronic nephritis are held to be secondary to arterial changes. Whether this be accepted or not, it is necessary to remember that different views are held as to the causation of arterio-sclerosis. The adherents of one view regard arterio-sclerotic changes as being an expression of degeneration in the walls of the vessels. The supporters of the other view hold the opinion, first expressed by Virchow, that arterio-sclerosis is due to an inflammatory pathological process. The opponents of this view have pointed that, if the process is inflammatory, the histological changes are not those of inflammation in other parts of the body. The round cell infiltration that is so characteristic of inflammatory lesions generally, is absent in the arterial wall. These objections have been met by Evans, who suggested that this may be explained by the fact that the arterial walls are relatively avascular structures. He admitted that anatomists have yet to determine how far this avascularity extends and suggested that the simultaneous appearance of cellular proliferation and fibrosis and of degeneration may depend on the adequacy of the supply of oxygen to the affected tissues. He held that the endothelial cells, having an adequate supply of oxygen, undergo proliferation and that as this is not so with the *tunica intima*, cellular fibrosis and degeneration occur in this layer. Arterio-sclerosis, according to this view, is a chronic arteritis. It will thus be seen that those who hold that osteo-arthritis is secondary to arterio-sclerosis, must define their view of the causation of the latter condition. If they think that arterio-sclerosis is inflammatory in origin, they are *ipso facto* in partial agreement with their opponents on the question of osteo-arthritis, for the latter hold that osteo-arthritis is the product of stimuli of a toxic or inflammatory nature. They go further, however, and hold that the changes occurring primarily in the joint surfaces are not dependent on arteritis as *fons et origo*. Arteritis, according to them, may occur, but it occurs late in the arthritic condition and may be due to the same causative agent as that producing the osteo-arthritis. Trauma sometimes plays a part in the causation of the disease and there are those who see in the osteo-arthritic changes an expression of inhibition or lack of coordination on the part of the secretions of the pituitary and other endocrine glands.

Dr. A. G. Timbrell Fisher has recently published a most important and helpful report on experimental and clinical observations made by him on the pathology and ætiology of osteo-arthritis.[1] He endeavours to explain that the nature of the changes produced is largely the result of the histological structure of the joint. The central area of the articular cartilage in a joint surface is covered by a superficial layer of flattened cells which lie parallel to the surface. It is from these superficial cells that those lying deeper are developed. He points out that there is an absence of blood supply in the central articular area as opposed to the lateral areas. In the latter areas the blood supply is abundant. He accepts Toynbee's explanation of the nutrition of articular cartilage as being dependent on the lymph exuded from the large and convoluted vessels in the cancellated tissue beneath. He rejects the suggestion that articular cartilage absorbs nourishment from the synovial fluid on the ground that the latter has a low protein content. He analysed normal synovial fluid and found that it contained 1.6% of protein, while blood plasma contains 3.5% to 4.3%. His finding in regard to the synovial fluid is practically that of normal tisssue fluid. Dr. Fisher refers to staining methods introduced by Shattock which show that articular cartilage is channelled by mucinous strands or areas of stroma and holds that nourishment from the blood plasma percolates along these mucinous portions. In this way he accounts for the conveyance of any toxic substance that may happen to be present to the central surfaces. He shows that in the early stage of the disease the central area undergoes a process of fibrillation, but states that this is a splitting of the matrix without metaplasia. As the process of degeneration of the central area progresses, there is overgrowth or lipping of the lateral portions of the articular cartilages. Dr. Fisher holds that this new cartilage is formed from the perichondrium. He reaches this conclusion as the result of his observations in affected joints and from experiments made by him with costal cartilage of animals and with joint cartilage of rabbits. In the rabbit the lateral portion of joint cartilage is capable of repair by proliferation from the perichondrium. The articular cartilage is covered laterally by a delicate extension of the synovial membrane and at its edge becomes fibrillated and gradually merges into fibrous tissue. The blood supply here is extensive and the overlying synovial extension is the seat of an anastomosis of vessels described by William Hunter and termed the *circulus articuli vasculosus*. Dr. Fisher holds that this vascular structure explains the difference in reaction on the part of the lateral areas (as opposed to the central areas) to the cause of osteo-arthritis. In other words, he thinks that the overgrowth is occasioned by the causal agent of the disease acting in a more vascular area. He also states that he regards the lipping and proliferation as a compensatory effort on the part of Nature to make good the degeneration of the central area. As proliferation extends, extensive chondrophytes are formed and this may later on be invaded by osteoblasts and thus the extensive osseous buttress formation encountered in late osteo-arthritis originates. As the process progresses, changes occur in the original bones; a compensatory sclerosis arises under the degenerated articular cartilage. In this sclerosed bone and also in the superjacent cartilage areas of cystic degeneration may sometimes be seen. The synovial membrane is not left free from attack. After the lipping has occurred, a thickening of the synovial membrane takes place and there is a resulting enlargement of the villous processes. These are well supplied with

[1] *The British Journal of Surgery*, July, 1922.

vessels in which Dr. Fisher can find no arterio-sclerotic changes. He states that arterio-sclerosis is always a late development and refuses the suggestion that it is an antecedent or causative condition.

As a result of his observations Dr. Fisher concludes that cases of osteo-arthritis may be classified into two large groups, those caused by trauma and those caused by bacterial toxins either formed locally or brought from a distance. He states that it is not possible at present to determine whether the cause operates after lowering the resistance of the joint by some means to the action of toxins, or whether endocrine failure in the chain of formation of metabolic endogenous products is the underlying agent. He states that in 95% of his cases of the disease he has been able to find a definite focus or foci of toxic absorption.

This work of Dr. Fisher is a valuable addition to a subject of complexity and interest. Although he admits his inability to explain the underlying reason why the central articular cartilage should be attacked in the first place, the blame probably does not lie with arterio-sclerosis. Were the causation of arterio-sclerosis an open book to the pathological investigator, it might be possible to obtain from some of its aspects a little light on the subject of osteo-arthritis. It is difficult to assign to trauma its proper place in the ætiology, although Dr. Fisher has shown by experiment that it does lower the resistance of a joint. This, however, is probably not the complete explanation. Dr. Fisher states that the synovial fluid from an osteo-arthritic joint contains toxins because, when injected into a healthy rabbit's joint, it produced osteo-arthritis. This experiment was not controlled by the injection of normal fluid. The reaction producing the joint changes may have been the result of the injection of a foreign protein, for such injections produce both a local and a general reaction. In fact, it is very difficult to prove the presence in the blood stream of toxins from a localized focus.

The disease must be regarded primarily as a degeneration which occurs as a reaction to a cause the nature of which has not yet been discovered. Dr. Fisher's definition is instructive. He states that it is not a disease *sui generis*, but rather a series of physiological or pathological changes that occur in a joint which it has been subjected to prolonged or oft-repeated injury, either mechanical or toxic, but of a moderate degree of severity.

NEPHROSIS.

Within recent years considerable advance has been made in the knowledge concerning that form of nephritis which has been known as parenchymatous. The parenchymatous lesion affecting children appears to arise without obvious cause and to involve a considerable amount of the tissue of both kidneys. Its pathology has been admirably described in 1918 by F. Volhart, who proposed the term nephrosis. At first the children do not appear ill. There is no pyrexia and beyond a little pallor the patients are usually well and lively. The first sign is œdema of the face; the extremities soon become affected and weakness sets in. The urine contains large quantities of albumin, but no blood. It is usually diminished in quantity. It contains hyaline and granular casts and some leucocytes. The prognosis is regarded as hopeless in the majority of cases. The disease may last for a considerable time and death is often caused by some intercurrent disease. While the pathology of the condition has been worked out with minute accuracy, there are still many gaps in our knowledge of the physiology of the renal function. Many observations have been carried out by competent workers, with the result that certain aspects of this question have been illuminated and various hypotheses have been elaborated. It is still uncertain how the œdema is produced and more information is required before the chemical processes associated with the failure of the kidney to functionate normally can be understood.

Dr. Herman Schwarz and Dr. J. L. Kohn have carried out some interesting studies in this connexion.[1] They had the opportunity of watching seventeen children with nephrosis, but they admit that the diagnosis was based on clinical and not on pathological evidence. In spite of extreme œdema the blood pressure was rarely raised. The permeability of the blood vessels interfered with the satisfactory performance of the phenol-sulphonephthalein test. Analyses of the blood were carried out in all these children. The urea nitrogen, the non-protein nitrogen, the uric acid and the creatinin nitrogen remained within normal limits. One child showed high values. Nitrogen retention and the increase in the amount of cholesterol in the blood of this child were associated with the final stages. It was admitted in a moribund condition with uræmia. Usually there is no tendency toward uræmia. The total serum albumin content is reduced in nephrosis. Only one of their patients had a serum protein content approaching normal. They found, however, that there was no evident parallelism between the serum albumin content of the blood and the severity of the disease. They fail to offer a satisfactory explanation of this lowered protein content of the blood. Epstein has suggested that the loss of albumin through the urine may be to some extent responsible for the diminished quantity in the blood. At the same time the cholesterol content is greatly increased. This fact was first ascertained by Chauffard. It has been shown that the cholesterol content of the suprarenal body is higher than that of any other tissue. The liver and the kidney are normally small store-houses of cholesterol. It is stated that cholesterol is synthetized in the body, although its supply in milk to infants seems to be of importance. The normal amount in the blood is between 0.12% and 0.22%. In the children with nephrosis it varied between 0.17% and 0.86%. Only one child had a normal cholesterol blood content. The authors are inclined to the view that there is some relationship between the high cholesterol content and the

[1] *American Journal of Diseases of Children*, August, 1922.

presence of œdema. They have not been able to study the fat partition in the stool, but in a few instances it appeared that the fat metabolism was normal. While this apparent relationship was noted, there was no evidence to show that cholesterol actually played a part in the determination of the œdema. An attempt was made to trace the mechanism leading to œdema in this condition. The œdema fluid contained protein to the extent of not more than 0.18%. They point out that the œdema fluid contains 0.4% of protein in cardiac dropsy and even as much as 1% in true nephritis. The salt content is necessarily the same as that of normal tissue fluids.

In the next place they endeavoured to obtain a better conception of the essential process by applying the water test of Koryáni. They found the remarkable fact that, notwithstanding the considerable œdema, the excretion of water was little less than normal and that very little was retained. The kidneys were capable of dealing with very large quantities of water. They suggest that the tissues are so saturated that they cannot take up any more. The urine during the stage of extreme œdema contained little or no chlorides, but during diuresis about twenty-eight grammes were excreted in twenty-four hours.

It will thus be seen that the processes involved in the passage of large quantities of albumin through the kidney, with a water-logging of the tissues and an increase of cholesterol in the blood, still need explanation. That the kidneys are primarily at fault is evident. The failure of the epithelium of the renal tissue in some way leads to an alteration in the permeability of the vessel walls, but this change is not extreme, for the œdema fluid contains no cholesterol and its serum albumin content is much less than that associated with other pathological conditions. It would be easy to incriminate the glands of internal secretions, as has been done, but this hypothesis does not provide a real explanation. Further information is required before the elemental facts can be brought into their correct relations to one another.

Australasian Medical Congress (British Medical Association).

APPLICATIONS FOR MEMBERSHIP.

All members of the British Medical Association in Australia, New Zealand or elsewhere, who intend to become members of the First Session of Congress in Melbourne, are requested to forward at once an application in the form set out below, together with a remittance of two guineas, to the appropriate official. Exchange must be added to all country and inter-State cheques.

Victorian members will address their applications to Dr. C. H. Mollison, Honorary Treasurer, 41, Spring Street, Melbourne. All other members will address their applications to the Local Secretary for their State or Dominion.

This immediate application for membership is required in order to facilitate the general arrangements and to allow an estimate to be formed of the accommodation required.

Extracts from Regulations Adopted by the Federal Committee of the British Medical Association in Australia, February, 1922.

"4. (*a*) Every member of any Branch of the British Medical Association in Australia or of the New Zealand Branch shall be entitled to be a member of Congress for any Session thereof upon his own application in writing to the Executive Committee and without election upon payment to the Executive Committee of the prescribed membership subscription."

4. (*b*) refers to legally qualified medical practitioners, not members of the British Medical Association. They should communicate with the General Secretary, Dr. A. L. Kenny, Medical Society Hall, Brunswick Street South, East Melbourne, Victoria (see The Medical Journal of Australia, October 14, 1922, page 447).

"11. The membership subscription for any Session shall be two guineas, unless otherwise determined by the Federal Committee with the advice of the Executive Committee."

Form of Application.

Dear Sir: I am a member of the ..... Branch of the British Medical Association. I intend to be present and I shall be accompanied by my wife (daughter). I enclose two guineas.

Name in full .....

Qualifications .....

Address .....

Local Secretaries.

The names and addresses of the Local Secretaries are as follows:

Dr. F. Brown Craig, 139, Macquarie Street, Sydney, New South Wales.

Dr. R. Marshall Allan, B.M.A. Building, Adelaide Street, Brisbane, Queensland.

Dr. R. Thorold Grant, "Kingsmead," Brougham Place, North Adelaide, South Australia.

Dr. D. M. McWhae, 262, St. George's Terrace, Perth, Western Australia.

Dr. E. Brettingham Moore, 149, Macquarie Street, Hobart, Tasmania.

Dr. C. H. Robertson, 1, Alfred Street, Auckland, North Island, New Zealand.

Dr. W. Marshall Macdonald, 231, High Street, Dunedin, South Island, New Zealand.

Abstracts from Current Medical Literature.

DERMATOLOGY.

Chronic Eczematoid Dermatitis and Asthmatic Symptoms from Contact with the Arsphenamines.

Joseph V. Klaudee (*Archives of Dermatology and Syphilology*, April, 1922) relates the history of a physician who had complained for eight months of chronic dermatitis of the hands. There was an eczematous scaly eruption with fissuring involving the index and second finger of both hands and a considerable amount of irritability, both of the affected and unaffected parts. At times an eczematoid eruption appeared on the face. Contact with neo-arsephenamin was thought to be responsible for the condition, as he frequently sneezed and noticed a constriction of the chest on opening a tube of this drug. He had been in the habit of administering neo-arseno-billon without wearing rubber gloves and a few drops of the solution frequently came in contact with his fingers. After wearing rubber gloves the dermatitis greatly improved and he no longer experienced respiratory symptoms. Cutaneous tests were undertaken. Two scarified areas were made on the forearm; on one was placed a 2% solution of arsphenamin (neutralized) and on the other a 2% solution of neo-arseno-billon. On a control scarified area distilled water was placed. In about four hours a definite wheal appeared on the two scarified areas, more noticeable on the area covered with neo-arseno-billon than on that with arsphenamin. The control area showed no reaction. Similar tests were made on syphilitic patients who were being treated with neo-arseno-billon and on three non-syphilitic patients. No reaction occurred in either group. In view of the apparent allergic basis of the patient's experience, the following procedure was carried out in an attempt at desensitization: On October 26, 27 and 28 0.0001 gramme of arsphenamin was given him by the mouth. On November 2, 3, 4 and 5 0.001 gramme was given. The dose was increased to 0.01 gramme on November 6, 7, 8 and 9. At this time the site of the previous skin tests became red and itched; the site of the control test showed no change. On November 10, 11 and 12 0.02 gramme was administered. The symptoms continued and the administration of the drug was discontinued. The patient was advised not to prepare the neo-arseno-billon for administration, to wear rubber gloves when injecting it and to prevent any of the solution from touching his hands. Since taking these precautions he has been entirely free from any symptoms.

Bismuth in Syphilis.

C. Levaditi (*La Presse Médicale*, July 19, 1922), reviewing the therapeutic use of bismuth in the treatment of syphilis, states that Balzer in 1889 carried out the first experiments on the treatment of syphilis with salts of bismuth. Unfortunately the serious results which attended the experiments on animals thus treated induced him to abandon any further experiments. A considerable time later, in 1916, Sauton and Robert showed in experimental syphilis that bismuth, especially the tartro-bismuthate of sodium and potassium, acted both as a preventive and a curative agent. Later Fournier and Guenot verified the statements of Sauton and Robert. After a considerable number of experiments carried out on rabbits, Sazerac and Levaditi undertook the treatment of syphilis in man with bismuth. The tartro-bismuthate of sodium and potassium was used, as this composition showed itself to be more stable and less toxic when injected subcutaneously or intramuscularly. These observers held that intravenous injections were absolutely contra-indicated. The first observations reported by Sazerac showed the results obtained in primary, secondary and tertiary syphilis. A patient with primary syphilis was treated twelve days after onset. No secondary manifestations were present. The presence of spirochætes was demonstrated in the primary sore. The patient's serum reacted to the Wassermann test. The course of treatment consisted of nine intramuscular injections of tartro-bismuthate of sodium and potassium in oily suspension at intervals of three to six days, the total amount administered being one gramme. The spirochætes disappeared on the third day; cicatrization occurred on the fifth day. After a period of eighteen days the patient's serum failed to react to the Wassermann test, nor did a reaction occur when the test was repeated eleven months later. Other cases of a similar nature were reported, the sera of patients with secondary and tertiary lesions both failing to show reactions to the Wassermann test after varying intervals. Fournier and Guenot confirm the statements made by Sazerac and Levaditi, that bismuth must rank as one of the most powerful anti-syphilitic agents.

Phenolphthalein Eruptions.

Fred Wise and E. W. Abramowitz (*Archives of Dermatology and Syphilology*, March, 1922) state that in susceptible persons the ingestion of phenolphthalein provokes a peculiar eruption of the skin. This eruption consists of a few widely scattered and irregularly grouped, polychromatic macular plaques, varying in diameter from that of a pin's head to several centimetres and varying in colour from pink to bright red, violet and deep purple. It is relapsing in its course, chronic in nature and usually results in a protracted pigmentation of the affected area of skin. Slight scaling may accompany the evolution of the lesions. A peculiar mottling is sometimes seen in the centre of the macules. Vesiculation, erosion and superficial ulceration may occur, more especially on the mucous membranes of the mouth and on the skin of the genitals. A burning sensation sometimes precedes and accompanies the appearance of the patches. The eruption is clinically a multiform erythema which, instead of vanishing, persists more or less indefinitely and terminates in a yellowish brown deposit of pigment in the affected sites. Relapses may occur following the ingestion of phenolphthalein. These relapses most frequently reappear on the original sites, but they may occur elsewhere. The eruptions resemble closely those caused by the use of antipyrine, arsphenamin and the neo compounds. Histological examination showed that the changes were similar to those found in *erythema multiforme*.

Potassium Permanganate as a Curative Agent in Dermatological Diseases.

Samuel Feldman and Benjamin F. Ochs (*Archives of Dermatology and Syphilology*, August, 1922) state that during the last four years a comparatively large number of patients have been successfully treated for epidermophytosis by means of potassium permanganate employed in the form of wet dressings in strengths of one in one thousand. In patients with a considerable amount of irritation it may become necessary to reduce the strength to one in two thousand or even lower. Exudation and maceration always call for a mild application, except in the intertriginous form of epidermo-phytosis found in the fingers and toes. The stronger solutions are borne well in these cases. The method used in treatment is to soak a pledget of cotton wool in a solution of the drug varying in strength from 1% to full saturation and to insert it between the toes or fingers once in twenty-four hours. One week is sufficient to clear up the lesions. When the condition is resistant, it may be necessary to keep up treatment for some time after apparent cure.

Erythema Multiforme Confined to the Mucous Membranes.

John Butler (*Archives of Dermatology and Syphilology*, July, 1922) reports an instance of *erythema multiforme* in a student who had always been in good health. On the palmar, plantar and dorsal surfaces of the hands and feet there were numerous bullous lesions. The buccal, lingual and labial mucous membranes were almost entirely involved. The mouth lesions consisted of severely inflamed, denuded areas covered with a greyish, viscid, mucous secretion. The patient experienced considerable difficulty in opening the mouth sufficiently to take nourishment. He made an uneventful recovery in three weeks. He was readmitted two years later with lesions in the mouth, rectum and œsophagus. There were no lesions of the skin and syphilis, Vincent's angina and pemphigus were excluded by serological examination. The disease ran the usual course of three weeks and annular stains conforming to the ringed lesions could be outlined in the regenerated mucous membrane.

RADIOLOGY.

Limitations of Radio-Diagnosis.

R. D. CARMAN (*New York State Journal of Medicine*, July, 1922) considers the limitations of Röntgenological diagnosis and deprecates the modern tendency to rely upon laboratory diagnosis rather than on thorough clinical examination with correlated laboratory findings; he also warns against the acceptance of the opinions of technicians and points out that skiagrams only permit of correct diagnosis by specially skilled physicians with a wide knowledge of anatomy, physiology, pathology and general science of medicine. Careful history taking and thorough examination should always precede X-ray examination. It is only fair to the patient to consider his case from all angles and the various clinical and laboratory findings must be checked. A warning is given against the too ready diagnosis of tuberculosis. The Röntgenologist cannot say whether the signs noted are the result of active or inactive lesions or whether they are not the result of a simple pneumonic process. The author considers it better to report the actual changes found and not to attempt a diagnosis as it is only possible to diagnose many of the conditions on microscopical examination. In bone diseases, for instance, typical appearances are easy to differentiate, but some instances of osteomyelitis, tuberculosis, syphilis and sarcoma are very difficult to distinguish by means of their shadows, while many rare diseases are apt to complicate the problem. In gastro-intestinal work it is not always possible to say that a lesion is malignant or innocent, but, working on the law of averages, a fairly accurate opinion may be given. Great difficulty is experienced in the diagnosis of adhesions, chronic appendicitis, gastroptosis and gall bladder disease. Adhesions usually are not worthy of note unless they produce obstruction. Great difficulty is experienced in demonstrating gall stones and in the great majority of instances they cannot be shown. Gastroptosis is really a normal state in the asthenic individual and should not be looked upon with alarm or be referred to the surgeon for operative procedure. Care must be used in the diagnosis of stasis and kinks, as much useless surgery is practised on subjects who are really free from such conditions and who are victims of over-eagerness in diagnosis.

Radiology and Physics.

G. W. C. KAYE (*The Proceedings of the Royal Society of Medicine*, June, 1922) lays stress on the importance of a training in physics for the medical student and he considers this training of especial importance to those who intend following the practice of radiology. The cooperation between the physicist and the medical man has rendered possible the advance in deep therapy and its attendant great successes. The researches of Eddington and others have shown that X-rays and electrons are produced in great quantities in the sun, but the X-rays are mostly absorbed in the outer layers of the atmosphere and this explains why conductiivity increases with altitude. X-rays and light rays are essentially the same, differing only in wave length. The author describes the wave length of X-rays emitted from platinum and tungsten at various voltages and discusses the nucleus theory of the atom according to which the atom is built up of a positive nucleus surrounded by a cluster of electrons grouped in rings equal in number to the atomic weight of the atom in question. The author does not consider that pastille measurement of X-rays can endure as a dose meter and suggests the use of some ionization meter. He calls attention to the fact that in England means of protection have lagged behind the advance in penetrative radiation and the operator is not sufficiently protected, while the patient is well protected. He lays stress on the importance of efficient ventilation to clear away the ozone and the use of coronaless aerials to minimize its production.

Generating Hard X-Rays.

J. HERNAMAN JOHNSON (*Archives of Radiology and Electrotherapy*, February, 1922) describes an assemblage of apparatus for the purpose of exciting the new "high voltage" Coolidge tube. The method consists of the immersion of the whole tube in oil and its operation at a potential of 200,000 volts. The author considers the cost of maintenance of the osmosis gas tubes, as used at Erlangen, to be excessive and regards the new Coolidge tube as more satisfactory. An ordinary forty-three-centimetre coil had the insulation between the primary and secondary specially strengthened and a turbine gas interrupter was used, while measurements were made between spheres. The tube was completely immersed in a lead-lined tank, which was filled with oil and supported on a specially built frame; suitable inspection and ray emission windows were provided. Six ampères in the primary circuit produced 3.5 milliampères at 200 kilovolts, while the Coolidge filament consumed 4.5 ampères. The filtration used consisted of three centimetres of oil, 0.5 millimetre of zinc, 7.5 centimetres of wood and three millimetres of aluminium. The percentage dose measurement gave 32% at ten centimetres with the anticathode skin distance at fifty centimetres. Further tests gave seven milliampères at 200 kilo-volts and 2.5 milliampères at 250 kilo-volts while no inverse current was noted. The author installed brass tube aerials, but has resorted to highly insulated cables as being preferable. A very ingenious photographic method of tube measurement is given and the author thinks that it is quite accurate.

Gastric Ulcer Diagnosis.

A. E. BARCLAY (*The Lancet*, February 4, 1922) deals with the radiographic diagnosis of gastric ulcer. He emphasizes the personal factor in these examinations and states that it is the experience of the man who does the screen work that makes this method effective and that skill and knowledge of palpation under the screen can only be gained after long experience and practice. Barclay recommends the use of the high tension transformer and Coolidge tube, but every care must be taken to protect the operator from direct and indirect irradiation. Efficient dark-room ventilation is also necessary to prevent sickness from ozone inhalation. Barium sulphate suspended in milk is used and the author often adds about a teaspoonful of sodium carbonate, as recommended by Carman, as he finds it allows of better visualization of the duodenal cap. The examination is carried out in the upright position. Barclay relies mainly on the screening and looks on plates merely as records. The various direct and indirect signs of ulcer are enumerated and the author does not think that hypertonicity, atony or gastroptosis can be considered as any guide to the presence or absence of gastric or duodenal ulcer. Hypersecretion is rather suggestive of prepyloric ulcer.

Treatment of Leuchæmia.

H. B. THOMPSON (*American Journal of Roentgenology*, November, 1921) considers the Röntgen ray treatment of leuchæmia. After discussing the tendency of different authorities to make artificial classifications of the various leuchæmias, he concludes that the recognition of the two main groups, namely, the myelogenous and the lymphatic types, is all that is necessary for therapeutic purposes. In the myelogenous type, there is a hyperplasia of the white cells originating in the bone marrow; these are the granular forms of white blood cells. In the lymphatic type there is principally an increase in the lymphocyte series of non-granular cells. In the first form, the spleen and bone marrow activity is increased, while in the second there is generally a hyperplasia of the lymphatic system. Both conditions may be present in the same patient and it is difficult to state which form predominates. The author has not used radium, as he considers that the wider area which can be covered by X-rays is much to be preferred in the treatment. Benzol has been tried as an adjunct in treatment, but it is of little use. Improvement always occurs, but recurrence is invariable. At the same time, the patient's condition is so favourably affected that it should always be a rule to give heavy radiations. The good effect depends on the amount of blood radiated and the author applies X-rays daily, using a different body area each day. After the white count has fallen to 25,000, the applications may be stopped, for improvement continues for some time after the cessation of radiation. The author uses a twenty-centimetre gap with four-millimetre filter of aluminium and leather and gives a tenfold erythema dose at each sitting.

British Medical Association News.

MEDICO-POLITICAL.

A MEETING of the Western Australian Branch of the British Medical Association was held at the Perth Hospital on September 20, 1922, DR. D. M. MCWHAE, C.M.G., C.B.E., in the chair.

Notification of Venereal Disease.

A circular from the Federal Committee of the British Medical Association in Australia with reference to the notification of venereal disease was read.

DR. DALE said that the Department of Health was prepared to allow to individual practitioners a certain amount of latitude in the matter of notification. It was the wish of the department to keep patients under observation, but not to harass them unduly by frequent notification.[1]

Death Certificates for Insurance Purposes.

A letter from Dr. L. E. S. Gellé in regard to the payment for death certificates issued to insurance companies was read. The Council of the Branch had replied that such fees should be paid by the relatives of the deceased.

A motion was carried endorsing the action of the Council.

ELECTION OF MEMBERS OF THE FEDERAL COMMITTEE.

AT a meeting of the Council of the Victorian Branch of the British Medical Association, held on September 27, 1922, DR. J. NEWMAN MORRIS, the Chairman of Committees, announced the re-election of MR. G. A. SYME and DR. R. J. FETHERSTON as members of the Federal Committee of the British Medical Association in Australia.

AT a meeting of the New South Wales Branch of the British Medical Association, held on September 29, 1922, DR. T. W. LIPSCOMB, the President, announced that as no further nominations had been received, DR. R. H. TODD and DR. J. ADAM DICK, C.M.G., were elected members of the Federal Committee of the British Medical Association in Australia.

ANNUAL MEETING OF DELEGATES OF THE AFFILIATED LOCAL ASSOCIATIONS OF MEMBERS WITH THE COUNCIL OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE annual meeting of the delegates of the affiliated local associations of members with the Council of the New South Wales Branch of the British Medical Association was held at the B.M.A. Building, 30 to 34, Elizabeth Street, Sydney, on October 6, 1922, DR. T. W. LIPSCOMB, the President, in the chair.

The following delegates were present: DR. R. A. ROBERTSON (Border Medical Association), DR. N. J. DUNLOP (Central Northern Medical Association), DR. G. A. BUCHANAN (Central Southern Medical Association), DR. K. S. MACARTHUR BROWN (Central Western Medical Association), DR. A. M. GLEDDEN (City Medical Association), DR. J. B. MCELHONE (Eastern District Medical Association), DR. F. G. N. STEPHENS (Eastern Suburbs Medical Association), DR. O. A. A. DIETHELM (North-Eastern Medical Association), DR. E. W. BUCKLEY (Northern District Medical Association), DR. F. GUY GRIFFITHS (Northern Suburbs Medical Association), DR. W. W. MARTIN (Southern District Medical Association), DR. L. FETHERSTON (South-Eastern Medical Association), DR. A. I. BLUE (South Sydney Medical Association), DR. W. M. A. FLETCHER (Western Suburbs Medical Association), DR. J. T. PATON (Western Medical Association).

Death of William Frederick Litchfield.

DR. N. J. DUNLOP referred in sympathetic terms to the great loss sustained by the Branch through the death of Dr. Litchfield, whose activities as Honorary Medical Secretary and as a past President had been of such great value to the New South Wales Branch. His generosity, his ability and his geniality had left them all the richer, although the first attribute had rendered him and those dependent on him the poorer. He hoped that the delegates would express their sympathy with his widow and family in a tangible manner. He moved that it be placed on record that the Branch had sustained an irreparable loss through his death.

The motion was carried, all members standing.

Welcome to Members.

THE PRESIDENT extended a hearty welcome to the delegates. He regarded the annual meeting with the Council at the most important meeting of the year, because it brought members in all parts of the State in contact with the Council of the Branch. Each of the local medical associations had had an opportunity of considering the questions that would be discussed at the meeting and had been able to instruct the delegates. The underlying spirit of the movement was a democratic one.

The Employment of Trained Nurses in Obstetric Work.

DR. E. W. BUCKLEY, representing the Northern District Medical Association, said that the friendly society lodge medical officers in certain areas had had great difficulty arising from the practice of untrained and incompetent women nursing women in their confinements. Puerperal sepsis had become very common and the medical officers had been unable to prevent it. It was held that the lodges should insist on the employment of trained nurses by the wives of their members. The secretaries of the lodges in one locality had been interviewed and had agreed that something should be done to stop this disastrous state of affairs. He therefore moved:

> That a provision be embodied in the Common Form of Agreement between medical officer and friendly society lodge to the effect that, wherever possible, none but trained nurses be employed in obstetric cases.

DR. N. J. DUNLOP, representing the Central Northern Medical Association, in seconding the motion, stated that in the olden days the conditions in the Newcastle district had been very bad in this respect. He was glad to report that the majority of the unsatisfactory women had disappeared and that only a few were still employed. He recognized, however, that some patients seemed to prefer the untrained to the trained woman. The former charged a smaller fee and somehow or another gained the confidence of the patients.

The South-Eastern Medical Association had determined that it was the duty of the Government to take action for the purpose of preventing the practice of untrained persons. It was desirable to prohibit untrained women from practising as nurses in obstetric, medical and surgical conditions. It would be inadvisable to insist on the reform in friendly society practice and to leave the remainder of the community unprotected.

It was further pointed out by other speakers that it would be detrimental to the public interest if competent women who, although untrained in the usual sense, had

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[1] *The Health Act, 1911-1915*, of Western Australia states:

"242D. Every medical practitioner shall forthwith give notice to the Commissioner in the prescribed form upon becoming aware that any person attended or treated by him is suffering from any venereal disease in an infectious stage. The notice shall state the age and sex of the patient and the nature of the disease, but shall omit the patient's name and address. Penalty: Five pounds.

"242E. If any patient who has been attended or treated by a medical practitioner for a venereal disease in an infectious stage shall fail to consult or attend such practitioner for a period of six weeks and the practitioner shall not within that period have received from another practitioner a notice that the patient has changed his medical adviser, then such first mentioned practitioner shall send to the Commissioner, in the prescribed form, a notice of the facts, stating the name and address of the patient. Penalty: Five pounds."

It must be noted that the individual opinion of a member of the staff of the Department of Health does not in any way absolve the members of the medical profession from their duty in regard to notification.

learned to practise aseptic midwifery and had proved to be valuable assistants to the medical practitioners were debarred from practice.

After further discussion, the President informed the delegates of the steps taken by the Council in regard to the introduction of legislation for the registration and supervision of obstetric nurses. The views of the Council had been placed before Mr. McGirr, when he was Minister of Health under the previous Government. The matter had received favourable consideration. The Council had urged that a supervisory body, similar to the Midwives Board of Great Britain, should be established. It appeared that a Bill would be presented to Parliament within a short time for this and other purposes. The Council would watch events and take any action held to be advisable. If legislation were introduced for the registration and supervision of midwives, there would necessarily be a provision entitling women who had been in practice for a specified time, who could produce evidence of competence and who were of good repute, to register within a fixed period after the passing of the Act, notwithstanding that they had not undergone a course of training as prescribed in the Act.

As it was felt that the original motion was not suited to the existing condition, an amendment was moved and received the sanction of the meeting. It was as follows:

> That this meeting of delegates of the affiliated local associations with the Council considers it highly desirable that all friendly society lodge members should employ only suitably trained nurses for confinements and that the attention of the friendly society orders be drawn to the matter.

It was further suggested that medical officers of lodges, when making arrangements for attendance at confinements, should inquire of the patient the name of the nurse she proposed to engage and should satisfy himself that this nurse was competent. In this way some of the difficulties might be overcome pending the introduction of legislation.

Fees in Private Practice.

DR. G. A. BUCHANAN, representing the Central Southern Medical Association, submitted a motion to the effect that the local associations should adopt a schedule of fees for private practice. He pointed out that the absence of any common understanding had led to considerable variations in private fees in contiguous districts. Some of the younger practitioners had found that the fees charged in certain towns were lower than those charged in other towns in the neighbourhood. They were not disposed to suggest an alteration to their seniors, as this might be regarded as dictating. It was thought that if a scale of fees were drawn up, the majority of practitioners would adopt it and uniformity would be achieved. Some anomalies existed in connexion with the fees charged in some towns in the area of the Central Southern Medical Association.

An interesting discussion ensued, in the course of which several delegates related their experience in the endeavour to obtain local uniformity.

DR. A. J. BRADY referred to an action taken nearly forty years ago by Sir Charles (then Dr.) MacKellar, who had instigated the drawing up of a scale of minimum fees for private practice. It had been found that the fees in Sydney were lower than they were in Melbourne. The fees proposed were not compulsory, but were intended to act merely as a guide. Dr. Brady thought that the scale had had a good effect in stabilizing the fees in Sydney. If such a scale had been useful in the old days in Sydney, he thought that it would be advantageous at the present time for the country districts.

Some of the suburban delegates pointed out that a general scale would be useless in their districts, as the industrial and the residential areas demanded different rates.

THE HONORARY SECRETARY produced what he believed was the only extant copy of the schedule referred to by Dr. Brady. It had been drawn up in 1883. It had been a most useful document. It was important that there should be some sort of standard for each locality or for the whole State. In the courts of law it was often useful to refer to the usual fees charged in a particular district and these fees were regarded as proper charges and were quoted as such. Several years ago Ludwig Bruck had published a medical directory in which the fees usually charged in private practice in New South Wales, Victoria and South Australia were given. In Canada an elaborate schedule had been drawn up for the guidance of medical practitioners. In this schedule the minimum and maximum fees for various forms of attendance were set forth, but it was specifically announced that in certain circumstances lower or higher fees might reasonably be charged. This schedule had received the approval of the Canadian College of Physicians.

The opinion was expressed that one scale for the whole State would be unworkable. The motion was adopted in the following terms:

> That each local association should have a schedule of minimum fees in private practice as a guide.

Other Matters.

Several other matters were considered and the delegates of the affiliated local associations expressed their views for the guidance of the Council.

Votes of Thanks.

On the motion of DR. T. W. LIPSCOMB a vote of thanks was accorded the delegates for their attendance.

DR. N. J. DUNLOP moved and DR. F. G. N. STEPHENS seconded a vote of thanks to Dr. Lipscomb for the hospitality of the Council and for his conduct of the meeting.

DR. E. W. BUCKLEY proposed a vote of thanks to Dr. R. H. Todd, the Honorary Secretary, whose energy and excellent management had contributed more than anything else to the value of the meetings. The vote was received with acclamation.

APPRECIATION OF THE SERVICES OF THE LATE ALEXANDER LEWERS.

AT a meeting of the Council of the Victorian Branch of the British Medical Association held on October 12, 1922, the following resolution was passed unanimously:

> That there be placed on the minutes an expression of the Council's deep sense of the conspicuous services rendered to the Victorian Branch of the British Medical Association for many years by Dr. Alexander Lewers.

NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

CUNNINGHAM, ANTHONY BENEDICT, M.B., Ch.M., 1921 (Univ. Sydney), 48, Alexandra Street, Manly.

KERR, WILLIAM ARTHUR, M.B., Ch.M., 1922 (Univ. Sydney), Morton Street, Wollstonecraft.

THE following have been elected members of the Victorian Branch of the British Medical Association:

GIBSON, JAMES, M.B., B.S., 1922 (Univ. Melbourne), 3, Staniland Grove, Elsternwick.

HIGGINS, EILEEN MURIEL, M.B., B.S., 1922 (Univ. Melbourne), Burke Road, East Kew.

O'KEEFE, ELIZABETH ELLEN, M.B., B.S., 1922 (Univ. Melbourne), St. Kilda.

PETERS, ALBERT LEWIS JULIUS, M.B., B.S., 1922 (Univ. Melbourne), 3, Brinsley Road, East Camberwell.

PITT, ETHEL KATHLEEN, M.B., B.S., 1922 (Univ. Melbourne), 8, Armadale Street, Armadale.

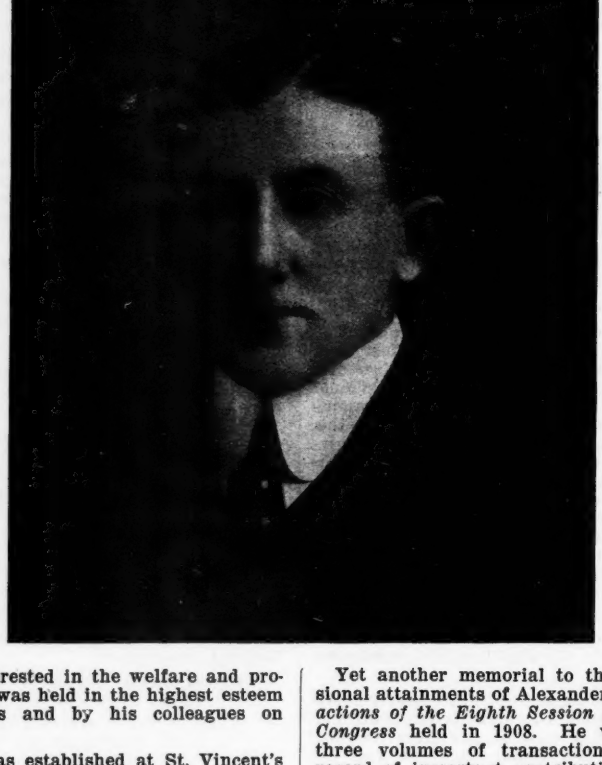
POOK, WILLIAM, M.B., B.S., 1922 (Univ. Melbourne), Alfred Hospital, Prahran.

Obituary.

ALEXANDER LEWERS.

THE death of Alexander Lewers, which occurred on September 16, 1922, deprived the medical profession in Victoria of one of its ablest and most distinguished members.

Alexander Lewers was born in Creswick, Victoria, and was the son of the late Alexander Lewers, one of the pioneers of the Creswick district. He received his early education at the Creswick Grammar School and subsequently studied in London at Charing Cross Hospital for the medical profession. He obtain the qualifications of member of the Royal College of Surgeons of England and licentiate of the Royal College of Physicians of London in 1890. On returning to Australia he was appointed a resident medical officer at the Adelaide Hospital, a position which he relinquished after twelve months in order to engage in general practice at Creswick. During his period in Creswick he held the appointment of Honorary Consulting Medical Officer to the Creswick District Hospital.



In 1898 Alex. Lewers again visited England in order to take up postgraduate study in dermatology. He worked in the Dermatological Department under Dr. James Galloway at Charing Cross Hospital. About this time he published "A Note on Leprous Fever" in the *British Journal of Dermatology*, October, 1899. He remained in England for two years, during which period he gained the Diploma of Public Health of the Royal Colleges.

From 1903 onwards Alex. Lewers practised as a physician in Collins Street, Melbourne, and in May of that year was appointed Honorary Physician to Out-Patients at St. Vincent's Hospital. This was the beginning of a long and distinguished association with St. Vincent's. He became Honorary Physician to In-Patients in 1908 and at the time of his death was Senior Honorary Physician to the hospital. He was at all times keenly interested in the welfare and progress of the institution and was held in the highest esteem by the hospital authorities and by his colleagues on the staff.

When a clinical school was established at St. Vincent's Hospital in 1910, Alex. Lewers was appointed a Clinical Instructor and Lecturer to Medical Students and shortly afterwards he became an Examiner in Clinical Medicine at the University of Melbourne. This position, a warrant of high status in the medical profession, he held until the time of his death.

Alexander Lewers was for many years a member of the Council of the Victorian Branch of the British Medical Association. A regular attendant at the meetings of the Council, he spoke perhaps infrequently, but his contributions to the discussions were notable for their singularly lucid and effective expression and bespoke a clarity of thought that was often of the greatest service in framing a resolution after a complex discussion. He was unsparing in the time he devoted to the affairs of the Victorian Branch and discharged the duties of member of various sub-committees of the Branch Council with never failing ardour.

At the outbreak of war Alexander Lewers recognized that it would be foolishness to offer himself for service overseas on account of the state of his health. He was therefore constrained to apply for a commission in the Australian Army Medical Corps Reserve. He was gazetted with the rank of honorary major on February 14, 1916, and he acted in this capacity in home service until the end of 1919.

Alexander Lewers will always be remembered as a distinguished writer on medical and literary subjects. He acted from 1907 onwards to the time of his death as correspondent for *The Lancet* and for many years, under the *nom de plume* of "Medicus," contributed popular articles on medical subjects to the Melbourne press. His extensive knowledge of medicine and literature was combined with exceptional facility of expression and clearness of exposition and he was a very frequent contributor to the *Argus* and *Australasian*.

In 1915 he published "Medicine and Meditation," a volume of light philosophical essays which THE MEDICAL JOURNAL OF AUSTRALIA described in a review as "somewhat the form of a lyric in prose. Each essay dealt with a single topic and felicity of language conveyed charm to the style."

It was by the exercise of his brilliant literary gifts that Alexander Lewers rendered his most signal services to the medical profession in that he acted for eleven years — from 1903 to 1914—as editor of the *Australian Medical Journal*, formerly the official organ of the Victorian Branch of the British Medical Association.

In July, 1914, the *Australian Medical Journal* and the *Australasian Medical Gazette* ceased to exist by arrangement with the Australasian Medical Publishing Company, Limited. The Council of the Victorian Branch then placed on record its appreciation of the valuable services rendered by Dr. Lewers in his editorship of the *Australian Medical Journal* and presented him with an appropriately inscribed gold watch as a token of gratitude.

Yet another memorial to the high literary and professional attainments of Alexander Lewers exists in the *Transactions of the Eighth Session of the Australasian Medical Congress* held in 1908. He was editor-in-chief and the three volumes of transactions remain as an excellent record of important contributions to medical science.

DR. FELIX MEYER writes:

For many years past it was my privilege to be brought into frequent and close association with Dr. Alex. Lewers at the monthly meetings of the Beefsteak Club. In the company of a number of men of various callings dining together once a month and listening to a paper on some subject connected with art, science, literature or the questions of the day, Dr. Lewers always appealed to his hearers by the quiet force, the lucidity, the directness and, above all, by the sincerity of his language. He was a ready and fluent speaker—his speech flowed easily, calmly—and there was an entire absence of oratorical effort. The comment, always illuminating, revealed the scholar and the

thinker. In an atmosphere of good fellowship, "of mirthful challenge and of gay reply," his camaraderie was in the true spirit of the brotherhood; he was good nature itself and his gentle cynicisms touched lightly and pleasantly.

His papers, always pleasurably anticipated by the "brethren," were masterly prose, individual in style, stimulating, compelling. One might say of him as of the cultured Hellene of old that "he had a sanely sober way of saying that which was sanely worthy to be said."

Widely and deeply read and a lover of art, his literary and artistic judgements reflected his critical acumen and fine sense of proportion. Tolerant where there was margin for toleration, he was uncompromising in his attitude to pseudo-scientific philosophies or the propagandists of *post mortem* utterances. He was a writer of graceful verse, much enjoyed by the brotherhood for its subtle humour, apt allusion and gentle raillery at our fancies and foibles.

Most men would speak of him as reserved. Very few knew him in the full sense of knowing a man. But in our little coterie, among the men with whom he foregathered month in, month out, year after year, it would have been impossible not to know the real Alex. Lewers, the man of wide human sympathies and quiet strength, the tranquil spirit, the sincere, likeable man. And his affection for the brotherhood was real and undisguised. To those who, like the writer, enjoyed his friendship—apart from the Club—his tenderness and thoughtfulness were unfailing. He was wont to speak of himself as a cheerful pessimist, but his pessimism hardly went beyond a frank disavowal of current shibboleths and useless conventions.

Dr. Lewers was an intellectual in the best sense; he had too much learning for his province; all aspects of human faculty appealed to him. His interests in life—life as it is lived—were many sided; he might with truth have said *"humanis nihil a me alienum."*

His work as a physician, his services to the medical profession are not here touched upon. His value lay in many directions and the tribute here paid to his memory belongs of right to a man who in life joined exceptional mental endowments to a fine and uncommon character.

Dr. L. S. Latham writes:

Dr. Lewers' sedate figure, pacing slowly and deliberately along, was for many years one of the most characteristic features of Collins Street. As a hospital physician, teacher and examiner he was familiar to the medical students of successive years. The medical profession knew him well from his conspicuous services to medical literature. The opinion of the general public on professional matters was formed in no small degree by his contributions to the daily press. He was, however, of a modest and retiring disposition and the strong barrier of his natural reserve was penetrated by comparatively few. Like Burton, he was *paucis notus, paucioribus ignotus.*

In the Council of the Victorian Branch of the British Medical Association his clearness of thought and lucidity of expression, with his singularly keen evaluation of social and political tendencies, made him an authoritative and potent counsellor. Similar conditions made him most highly valued at St. Vincent's Hospital, both by the staff colleagues and by the Order of the Sisters of Charity by whom the hospital is conducted. His high intellectual power and wise judgement were conjoined with a kindliness and a selfless idealism that made him stand high in the esteem and deep in the hearts of those privileged to be his colleagues. In a situation of difficulty he could always be relied upon to think coolly and act wisely and bravely. It was thus in keeping with his character that, when called to confront the supreme issue, to look death in the face and go forward, he went calm and unafraid. On the occasion of the death of Shackleton Dr. Lewers wrote a noble poem with the title "Shackleton Goes Home." The last lines, in which he pays a tribute to the great explorer, may well be taken and applied to himself:

". . . A fearless soul has heard the call, and passed
To find a vaster world, and be at rest."

Correspondence.

THE MELBOURNE POST-GRADUATE COURSE.

Sir: Recent issues of The Medical Journal of Australia refer to the November post-graduate course at Melbourne. Because of its possible interest to some country practitioners, I beg your indulgence to publish the expressed opinion of several graduates who attended this course in 1921.

Eleven practitioners from outside Victoria attended. They were unanimous in keen appreciation of the lecturers and other gentlemen who conducted the course. The general arrangements were excellent. Every endeavour was made to suit the work to the need of those attending. In the two weeks a remarkably wide field was covered in a concise, practical manner. Perhaps the most striking feature was the judicious sifting out by the lecturers of recent important work, which was presented in a manner impossible to attain by reading only.

At least one graduate is making a two thousand-mile trip in order to attend the course again this year. Is it too much to hope that the near future will see each State periodically conducting its own post-graduate course?

Yours, etc.,

K. G. Aberdeen.

Northam, Western Australia,
September 26, 1922.

DIATHERMY AND RADIO-THERAPY.

Sir: I am indeed delighted to know that I was mistaken in thinking that Dr. Kent Hughes had prejudice against X-ray therapy, but the impression was gained from observation of Dr. Kent Hughes's attitude towards the subject at the Brisbane Congress and from perusal of Dr. Hughes's paper on "Diathermy."

With regard to figures, those quoted by me, as will be seen by my paper, had no reference to early cases (and indeed included several cases which were too extensive for surgical procedures), but were made up of examples of all stages and yet showed the percentage of cures quoted. Therefore, a statement that diathermy "should" provide 100% of cures in early cases does not impress me. For the matter of that, X-ray therapy also should and, given early cases and correct methods, does produce 100% of cures in many cases; therefore, no preference can be given to diathermy on this count.

I am surprised that the cost of diathermy, including the anæsthetist's fee and possibly private hospital fee, should be less than that of X-ray therapy, which in these early cases only occasionally exceeds six and practically never exceeds ten guineas. I should think at best this score is even.

Then on the account of shock and lying up I am willing to allow that the score is even, but there is "some pain"—a score for X-ray therapy—beside that allowed for the necessity of administration of an anæsthetic for diathermy. The avoidance of damage to neighbouring essential healthy tissue must be accorded a point in favour of radiation.

I really cannot follow Dr. Kent Hughes's reasoning when he states that, except for the need of an anæsthetic, every point is in favour of diathermy. In reality, one point only is in favour of diathermy, *viz.*, the shortness of the period of treatment; on all other points the score is in favour of radiation or the score is even.

The question of "mutilation" apparently does not appeal to Dr. Kent Hughes and the value at least in the mind of the patient of the avoidance of the necessity for anæsthesia seem to be greatly under-estimated by him. The possibility of treating and curing the pre-rodent lesions which accompany the rodent so often is another point scored by the radiation method.

The use of salicylic acid is, to my mind, at best only a temporary expedient, softening and removing the accumulated scale, but obviously unable to prevent the proliferation of the basal layer and at worst a chemical irritant

capable of provoking a change from the pre-rodent to the actual rodent stage. Such methods are to be deprecated, in my opinion at least, and I should really like to ask Dr. Kent Hughes to have a couple of erythema doses of X-rays filtered through a millimetre of aluminium delivered to the involved areas. I am sure he will be pleased with the results.

In my former letter I was constrained for lack of space to omit comment on what struck me as an extraordinary statement, *viz.*, that there are to be seen "many more horrible cases of this disease (rodent) than when I (Dr. Hughes) was a student." My experience is exactly opposite and I am convinced that, in spite of the greatly increased numbers in the Out-Patients' Department generally at Royal Prince Alfred Hospital, we see a far smaller number of these horrible cases than when I was a student.

The explanation of Dr. Hughes's observation lies, I am sure, in the consideration of the fact that he was a student in London, where rodent is comparatively rare and practises now in Australia, where it is regrettably common and in a special department of a city hospital to which such horrible cases tend to gravitate.

It would be perfectly fair of me to insist that the state of affairs at Royal Prince Alfred Hospital is due to the extensive use of radiation treatment, since Dr. Kent Hughes implies the opposite by his observation.

But the explanation really is otherwise I feel sure, *viz.*, that Dr. Hughes's observation is really due to the special circumstances of time, especially of place, of his student and recent experience.

Yours, etc.,

E. H. Molesworth.

"Beanbah," 235, Macquarie Street,
Sydney, September 27, 1922.

PUERPERAL INFECTION.

Sir: Owing to the lateness of the hour, it was impossible to discuss Dr. Chenhall's excellent paper on puerperal infection at the meeting on August 11, 1922, and these are a few criticisms I should like to offer:

In this paper, as in most contributions on this subject, there is no reference to what, in my opinion, is the most important element with regard to the treatment of puerperal sepsis. That is what might be called the time element.

Uterine infection may be aptly compared with war wound infection and in both fæcal organisms play a large part.

In the war it was gradually forced upon us that the nearer the front line the wounds were cleared of putrescible material and drained, the better the results. The time element was all-important.

Now this same principle applies to uterine infections, but we do not seem to act in accordance therewith. We rather resent the suggestion that our aseptic technique may have been imperfect and prefer to suspect any possible source of fever than the uterus. In this way precious time is lost and too often the golden opportunity for successful intervention is allowed to slip away.

The teaching that it is dangerous to meddle with the *post partum* uterus is partly responsible for this. Dr. Chenhall seems imbued with this idea when he bids the accoucheur to remember, amongst other things, "that manual removal of the placenta is the most dangerous of all operations." This is a statement with which I entirely disagree. In a fairly long experience I cannot remember any ill-effect attributable to this operation. On the contrary, when manual removal of the placenta has been necessary, I have always felt increased safety and satisfaction in the knowledge that the uterine cavity was completely empty.

The trouble is that we do not interfere early enough. Twenty-four hours may easily make all the difference to the patient between rapid recovery and death, yet we hesitate to admit the possibility of uterine sepsis and wait until to-morrow. Why not assume that the first rise of temperature and pulse is of uterine origin and act at once? Early interference will do no harm, whereas if we delay, the infection may get beyond our reach.

After all, the interference necessary is only slight. A broad strip of iodoform gauze saturated with tincture of iodine carried to the top of the uterine cavity and left there for about twelve hours will meet requirements. The opportunity may be taken to grope for placental remnants with a pair of ovum forceps, if at hand, but the main thing is to discourage bacterial growth and to do it at the earliest possible moment.

We must not expect too much from asepsis in midwifery. We all know how important it is and how it has been the means of stopping the spread of puerperal fever. It is no use, however, talking of sterilizing the parts of the patient concerned in parturition, because it cannot be done and, if it could be done, they would almost certainly become reinfected during delivery.

With the most rigid asepsis possible we must not expect to avert autogenous infection, provided that there is retention in the uterus of culture media, such as retained lochia, blood clot, of placental remnants (Polak's experiments notwithstanding).

However desirable asepsis may be, it is practically unattainable. An empty contracted uterus (which implies also empty sinuses) and good drainage are the best safeguards against bacterial invasion.

Dr. Chenhall says: "During recovery secure physiological rest and, on the third day, unless infection contra-indicate, elevate the head and shoulders, which will aid vaginal drainage. Even slight infection contra-indicates such early movement." I feel sure this is not good counsel. To promote drainage of the uterus and posterior vaginal fornix, puerperal patients should be encouraged to sit up from the start, especially during micturition and defæcation. Lacerations of the cervix and vagina, being open, do not lend themselves to dangerous infection so readily as uterine sinuses filled with dead blood and they are more amenable to the treatment indicated above.

Yours, etc.,

J. Morton.

Macquarie Street, Sydney,
September 28, 1922.

NUTRITIONAL DISORDERS OF INFANCY.

Sir: I have read with intense interest the papers published in your issue of September 30, 1922, under the names of Dr. Margaret Harper and Dr. L. R. Parker. Such teaching as they offer would indeed be helpful to students. I quite agree with the charge made as to the inadequacy of the instruction given during the medical course on this subject. It is not only inadequate, but from the results I should say wrong. I was many years in practice before I realized the futility and harmfulness of carrying formulæ for preparing the various kinds of infants' foods at successive ages in my head so as to please the parents and friends of a marasmic baby by giving offhand a recipe they had not yet tried. When the little mite is relieved of its suffering by the merciful hand of death, those standing sorrowfully around just lay this flattering unction to their souls that they had tried everything—except the right thing.

Is it politic for a teacher of high standing to boast that he can rear an infant from birth on artificial food? Please, Dr. Mills, that is propaganda of a dangerous kind. No wonder there are so many imitators who, failing to do what you can do, are keeping up our mortality rates. How hard it makes the task of the young practitioner when he is asked and is expected to recommend a dietary because the mother's milk "disagrees" or is "failing"? His duty is to say that such things do not occur under proper management. Nobody believes him, because older men and teachers have condoned this crime. Is a baby reared on artificial food "quite satisfactory"? I think not. He leaves the home, but that is not the end of his struggles by any means. Without a doubt he has his handicap.

Dr. Harper's report of a case of re-establishment of breast feeding is very gratifying. I have frequently done it and consider that there is no limit of time in which to try. Some result will accrue and complemental feeding becomes a reasonable and justifiable compromise.

I had rather that Dr. Parker kept his theory of delayed glandular development more in the background as a causa-

tive agent of nutritional disorders. He admits the existence of a cause which he calls secondary, "not so veiled in obscurity." That is the kind of cause that appeals to me. "Battering about" he very expressively describes it. It must not be taught or countenanced in any way that mother's milk may disagree with the baby. It is the baby that disagrees with the milk and, after all, this is only the beginnings of the adjustments, of the compromises that beset us all through life. In only one case have I admitted to the mother that her milk was not suitable; but that was many years ago. In this instance I administered twenty cubic centimetres of her milk to the baby subcutaneously on three occasions. By the time this was accomplished the baby had adjusted himself quite satisfactorily. While admitting that the scientific side of the question is of utmost importance, I must insist that more common sense and practical knowledge, if brought to bear at once, will save more lives from now on in our present state of knowledge than can be accomplished by the most painstaking original research. Let such good work go on, but commence to save lives at once. Put an end to this wicked propaganda that leads mothers and most individuals concerned in children's welfare to firmly believe that artificial food can replace with advantage the natural food for infants.

Do not the medical officers of baby homes and hospitals complain that their task almost invariably is to cure what could have easily been prevented?

The problem of infant mortality is wrapped up in the establishment and maintenance of lactation, not a difficult one. It does not depend on devising impossible substitutes, nor on discovering why they are impossible.

Yours, etc.,

A. C. F. HALFORD.

Wickham Terrace, Brisbane,
October 1, 1922.

Post-Graduate Work.

NOVEMBER COURSE IN MELBOURNE.

THE NOVEMBER POST-GRADUATE COURSE which is being organized by the Melbourne Permanent Committee for Post-Graduate Work, as has been announced, will take place from November 13 to November 25, 1922. The following have been invited to deliver lectures or to hold demonstrations:

Melbourne Hospital.

DR. H. R. DEW	DR. K. A. McLEAN	DR. S. V. SEWELL
DR. M. C. GARDNER	DR. R. P. McMEEKIN	DR. R. R. STAWELL
DR. JOHN GORDON	DR. L. J. C. MITCHELL	DR. R. H. STRONG
DR. W. A. HAILES		DR. H. H. TURNBULL
DR. K. HILLER	DR. J. N. MORRIS	DR. W. G. D. UPJOHN
DR. VICTOR HURLEY	DR. H. ALAN NEWTON	DR. R. R. WETTENHALL
DR. B. KILVINGTON		
DR. F. B. LAWTON	DR. S. W. PATTERSON	DR. B. T. ZWAR

Alfred Hospital.

DR. R. C. BROWN	DR. J. F. MACKEDDIE	DR. J. P. MAJOR
DR. J. S. BUCHANAN		DR. B. QUICK
DR. C. G. CROWLEY	DR. A. FAY MACLURE	DR. M. D. SILBERBERG
DR. JOHN KENNEDY		

Saint Vincent's Hospital.

DR. H. B. DEVINE	DR. A. N. McARTHUR	DR. C. G. SHAW
DR. L. S. LATHAM		DR. A. E. ROWDEN WHITE
DR. J. FORBES MACKENZIE	DR. D. MURRAY MORTON	

Women's Hospital.

DR. R. W. CHAMBERS	DR. H. CAIRNS LLOYD	DR. R. N. WAWN
DR. A. R. FOWLER		DR. R. M. WILSON
DR. R. H. MORRISON	DR. J. H. NATTRASS	

Children's Hospital.

DR. R. M. DOWNES	DR. C. W. B. LITTLEJOHN	DR. H. H. TURNBULL
DR. S. W. FERGUSON		DR. W. G. D. UPJOHN
DR. R. L. FORSYTH	DR. H. D. STEPHENS	DR. REG. WEBSTER

Eye and Ear Hospital.

DR. W. F. ORR DR. P. S. WEBSTER

There will be demonstrations in infectious diseases, antenatal work, eye and ear affections and venereal diseases and skin lesions in addition to general medicine, surgery and diseases of women and children.

The meeting of the Victorian Branch of the British Medical Association will be held in conjunction with the Post-Graduate Course and the Pædiatric Society at the Children's Hospital, Carlton, on November 15, 1922, at 8.15 p.m.. The programme will be arranged by the members of the honorary medical staff of the hospital.

Proceedings of the Australian Medical Boards.

VICTORIA.

THE undermentioned have been registered under the provisions of the *Medical Act, 1915*, as duly qualified medical practitioners:

AITCHISON, RODERICK JOHN, M.B., B.S., 1922 (Univ. Melbourne), 273, Bay Street, Brighton.

ALEXANDER, JAMES BUCHANAN, M.B., B.S., 1922 (Univ. Melbourne), 27, Glendearg Grove, Malvern.

BACKWELL, CLAUDE EWART, M.B., B.S., 1922 (Univ. Melbourne), 34, Myers Street, Geelong.

BUZZARD, IRVING, M.B., B.S., 1922 (Univ. Melbourne), "Norwood," Glenhuntly Road, South St. Kilda.

CAMPBELL, RODERICK ALFRED, M.B., B.S., 1922 (Univ. Melbourne), 122, Tennyson Street, St. Kilda.

COLAHAN, BASIL NICHOLAS ORR, M.B., B.S., 1922 (Univ. Melbourne), c.o. Dr. F. Colahan, Carlisle Street, East St. Kilda.

DAVIS, HARRY LYALL ELDERTON, M.B., B.S., 1922 (Univ. Melbourne), National Bank, Bridge Road, Richmond.

EDMUNDS, LESLIE FRANCIS, M.B., B.S., 1922 (Univ. Melbourne), 4, Isabella Grove, Hawthorn.

ENTICKNAP, CHARLES ROY, M.B., B.S., 1922 (Univ. Melbourne), 63, Lily Street, Bendigo.

GIBSON, JAMES, M.B., B.S., 1922 (Univ. Melbourne), "Fern Lea," Staniland Grove, Elsternwick.

GILBERT, DUNCAN THOMAS, M.B., B.S., 1922 (Univ. Melbourne), 58, Fellows Street, Kew.

GREEN, RICHARD THOMAS BONFIELD, M.B., B.S., 1922 (Univ. Melbourne), 20, Florence Road, Surrey Hills.

HARRIS, THOMAS ALEXANDER BRITTEN, M.B., B.S., 1922 (Univ. Melbourne), 595, Burke Road, Camberwell.

HIGGINS, EILEEN MURIEL, M.B., B.S., 1922 (Univ. Melbourne), Burke Road, East Kew.

HUGHES, FLORENCE MARJORIE, M.B., B.S., 1922 (Univ. Melbourne), 34, Hopetoun Street, Elsternwick.

JENNINGS, ERNEST CHARLES, L.L. Mid., R.C.P. *et* S., Irel., 1904, "Fernleigh," Bluff Road, Black Rock.

KIRSNER, ERNEST, M.B., B.S., 1922 (Univ. Melbourne), 140, Brunswick Street, Fitzroy.

LEY, THOMAS URBAN, M.B., B.S., 1922 (Univ. Melbourne), Warragul.

MASON, ALFRED ERIC, M.B., B.S., 1922 (Univ. Melbourne), "Whitburn," Milton Road, Auchenflower, Brisbane.

MEAGHER, EDWIN THOMAS, M.B., B.S., 1922 (Univ. Melbourne), 1035, Drummond Street, North Carlton.

NIALL, JOHN HENRY, M.B., B.S., 1922 (Univ. Melbourne), Bay Road, Sandringham.

O'KEEFE, ELIZABETH ELLEN, M.B., B.S., 1922 (Univ. Melbourne), c.o. Hedderwick, Fookes & Alston, Solicitors, 103, William Street, Melbourne.

PARER, INEZ JOSEPHINE, M.B., B.S., 1922 (Univ. Melbourne), "Gerona," Weighbridge Street, Surrey Hills.

PETERS, ALBERT LEWIS JULIUS, M.B., B.S., 1922 (Univ. Melbourne), 3, Brinsley Road, East Camberwell.

PINCUS, FABIAN FRANZ, M.B., B.S., 1922 (Univ. Melbourne), 209, Victoria Parade, East Melbourne.

PITT, ETHEL KATHLEEN, M.B., B.S., 1922 (Univ. Melbourne), 8, Armadale Street, Armadale.

POOK, WILLIAM, M.B., B.S., 1922 (Univ. Melbourne), Toolleen.

RICHARDS, REGINALD ERNEST, M.B., B.S., 1922 (Univ. Melbourne), 128, Wellington Street, Kew.

SPEED, ASHCROFT DERRINAL, M.B., B.S., 1922 (Univ. Melbourne), 24, Lewisham Road, Windsor.

SPENCE, ROBERT ALLAN, M.B., B.S., 1922 (Univ. Melbourne), 90, Olinda Street, Quarry Hill, Bendigo.

STEVENS, ROY HALFORD, M.B., B.S., 1922 (Univ. Melbourne), "Barholme," 11, Parlington Street, Canterbury.

SUMMONS, HEDLEY FRANK, M.B., B.S., 1922 (Univ. Melbourne), 21, Princess Street, Kew.

SWEETNAM, REGINALD INNES, M.B., B.S., 1922 (Univ. Melbourne), Penshurst.

WHITE, FREDERICK JOHN, M.B., B.S., 1922 (Univ. Melbourne), 81, Tooronga Road, East Malvern.

WORCH, HAROLD CHISHOLM, M.B., B.S., 1922 (Univ. Melbourne), 61, Stanhope Street, Malvern.

Additional Diploma Registered.

MAXWELL, LESLIE ALGERNON IVAN, M.D., 1921 (Univ. Melbourne).

Books Received.

AIDS TO TROPICAL HYGIENE, by R. J. Blackham, C.B., C.M.G., D.S.O., M.D., F.R.F.P.S., M.R.C.P.E., D.P.H., with a Preface by Sir John Goodwin, K.C.B., C.M.G., D.S.O., K.H.S., F.R.C.S.; Second Edition; 1922. London: Baillière, Tindall & Cox; Foolscap 8vo., pp. 248. Price: 4s. 6d. net.

FOOD, HEALTH AND GROWTH: A DISCUSSION OF THE NUTRITION OF CHILDREN, by L. Emmett Holt, M.D., LL.D.; 1922. New York: The Macmillan Company; Sydney: Angus & Robertson, Limited; Crown 8vo., pp. 273. Price: 7s. 6d..

HUGHES'S PRACTICE OF MEDICINE, INCLUDING A SECTION ON MENTAL DISEASES AND ONE ON DISEASES OF THE SKIN, by R. J. E. Scott, M.A., B.C.L., M.D.; Twelfth Edition; 1922. Philadelphia: P. Blakiston's Son & Company; Crown 8vo., pp. 834, with 63 illustrations. Price: $4.00.

PRINCIPLES AND PRACTICE OF X-RAY TECHNIC FOR DIAGNOSIS, by John A. Metzger, M.D.; 1922. St. Louis: The C. V. Mosby Company; Royal 8vo., pp. 144, with 61 illustrations. Price: $2.75.

"SUGGESTION" AND COMMON SENSE, by R. Allan Bennett, M.D., M.R.C.P.; 1922. Bristol: John Wright & Sons, Limited; Crown 8vo., pp. 105. Price: 6s. net.

THE SURGICAL DISEASES OF CHILDREN: A HANDBOOK FOR STUDENTS AND PRACTITIONERS, by Frederick C. Pybus, M.S., F.R.C.S.; 1922. London: H. K. Lewis & Company, Limited; Demy 8vo., pp. 426, with 288 illustrations. Price: 18s. net.

X-RAY DOSAGE IN TREATMENT AND RADIOTHERAPY, by William D. Witherbee, M.D., and John Remer, M.D.; 1922. New York: The Macmillan Company; Sydney: Angus & Robertson, Limited; Crown 8vo., pp. 87. Price: 8s. 6d..

Medical Appointments.

IT is announced that DR. J. NEWMAN MORRIS (B.M.A.) has been elected a member of the Board of the Queen's Memorial Infectious Diseases Hospital.

* * * *

DR. W. B. CHAPMAN (B.M.A.) has been appointed Acting Government Medical Officer and Acting Medical Officer to the State Children Department at Townville during the absence of DR. ERNEST HUMPHRY (B.M.A.).

* * * *

DR. J. H. WILSON (B.M.A.) has been appointed Government Medical Officer at Orange, New South Wales.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney	Australian Natives' Association Ashfield and District Friendly Societies' Dispensary Balmain United Friendly Societies' Dispensary Friendly Societies Lodges at Casino Leichhardt and Petersham Dispensary Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney Marrickville United Friendly Societies' Dispensary North Sydney United Friendly Societies People's Prudential Benefit Society Phœnix Mutual Provident Society
VICTORIA: Honorary Secretary, Medical Society Hall, East Melbourne	All Institutes or Medical Dispensaries Australian Prudential Association Proprietary, Limited Manchester Unity Independent Order of Oddfellows Mutual National Provident Club National Provident Association
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane	Brisbane United Friendly Society Institute Stannary Hills Hospital
SOUTH AUSTRALIA: Honorary Secretary, 12, North Terrace, Adelaide	Contract Practice Appointments at Renmark Contract Practice Appointments in South Australia
WESTERN AUSTRALIA: Honorary Secretary, Saint George's Terrace, Perth	All Contract Practice Appointments in Western Australia
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington	Friendly Society Lodges, Wellington, New Zealand

Diary for the Month.

OCT. 21.—Northern Suburbs Medical Association, New South Wales.
OCT. 24.—New South Wales Branch, B.M.A.: Medical Politics Committee; Organization and Science Committee.
OCT. 25.—Victorian Branch, B.M.A.: Council.
OCT. 26.—South Australian Branch, B.M.A.: Branch.
OCT. 26.—Western Medical Association (Orange), New South Wales.
OCT. 26.—Brisbane Hospital for Sick Children: Clinical Meeting.
OCT. 27.—New South Wales Branch, B.M.A.: Branch.
OCT. 27.—Queensland Branch, B.M.A.: Council.
OCT. 30.—Victorian Branch, B.M.A.: Council Nomination Paper Issued.
NOV. 3.—Queensland Branch, B.M.A.: Branch.
NOV. 8.—Western Australian Branch, B.M.A.: Council.
NOV. 8.—Melbourne Paediatric Society.
NOV. 9.—Victorian Branch, B.M.A.: Council; Nomination of London Representative.
NOV. 10.—New South Wales Branch, B.M.A.: Clinical Meeting.
NOV. 10.—Queensland Branch, B.M.A.: Council.
NOV. 10.—South Australian Branch, B.M.A.: Council.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, B.M.A. Building, 30-34, Elizabeth Street, Sydney. (Telephone: B. 4635.)

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